India: Historical Beginnings and the Concept of the Aryan

Essays by

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Popular Social Science

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Romila Thapar
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Preface

What was once a fairly straight-forward story about the beginnings of Indian history now draws on complex and controversial arguments. The controversies relate in part to the archaeological data now available and to the advances in the study of historical linguistics, as much as to new theories of interpreting the data. The latter should be and they generally are, attempts to reconstruct that past with as much accuracy as possible. However, as happens in the interpretation of the past in periods of intense nationalism, there are also attempts to interpret the past in a manner that assists in supporting ideologies of identity in present times. Interpretations of these kinds can and do deviate from scholarly concerns adding to the problems that a historian usually faces in co-relating complex data. The essays brought together here are an attempt to explain the background to an early segment of Indian history, and to indicate the kinds of evidence available and the questions and theories that are under discussion among scholars. A universally acceptable recounting of what happened would be difficult given that some of the evidence is tentative and can change with further discoveries. But an attempt can be made to provide more informed data and to explain the kinds of problems involved.

The historical focus has moved from earlier discussions about identifying the Aryans to investigating the histories of the relevant regions and periods. The complexity of the questions now asked is partly due to the expertise required in handling the varied range of evidence. Archaeological evidence from north-western India and Afghanistan goes back to pre-Vedic times. It is understood not only through familiarity with the techniques of excavation but equally with methods of interpretation. Merely to pick on stray items from excavations and seek their equivalents in the literary sources and then equate the two, belies the importance of both archaeological and textual data.

The literary sources, in this case the *Vedas*, are composed in Vedic Sanskrit, which incidentally is not identical with classical Sanskrit. To use them as textual evidence means that they have to be subjected to linguistic analyses, as some have been. Thus, it is not enough merely to know Sanskrit to be able to pronounce on the linguistic evidence. It is necessary to be familiar with how Indo-Aryan languages (to which group Vedic Sanskrit belongs), are analysed in terms of the rules of syntax, morphology, phonetics, vocabulary and forms of linguistic change. Historical linguistics is in part a social science and requires its own expertise as does archaeology. In writing on this period the tendency often is to focus on the evidence from one source and set aside that from the other.

It is the unenviable role of the historian to pull the evidence together. What the historian is concerned with now is not just 'the Aryan' as a historical category but the range of societies that co-existed between 3000 and 500 BC and their mutual inter-action. Some were agro-pastoral, others agricultural and yet others urban, with much interdependence; some were chiefdoms and others inching towards kingdoms; and a diversity of languages and ritual practices is also suggested. Relevant questions probe the interface between

human settlements and their environment as well as the social, economic and religious forms that evolved. How for instance, does a cattle-rearing society differ from one that conducts overseas trade? To give adequate attention to all of these would require a large volume or two. Something far less is being attempted here in pointing the reader to directions that may be illuminating in the current studies of early history.

As a preliminary to these aspects it is also necessary to consider how the concept of 'the Aryan' took form in the last couple of centuries. Historiography or the history of an idea or a theory, thus, becomes a pertinent study. The understanding of what is meant by 'Aryan' has been intellectually challenging and occasionally volatile. It has been used by colonial and nationalist writers of various hues in locating and legitimising identities and has therefore had a considerable impact on the way in which the social and political history of India has been projected. The analysis of this history—which is on-going among historians—would be an extensive enterprise. It can only be glanced at in a collection of articles such as this.

The attempt in this book is to set out the parameters of the problem in terms of the various aspects that impinge upon it: the history of the concept and how it has influenced historical thinking about the beginnings of Indian history; the archaeological evidence which points to new directions but also has its own disciplinary limitations in identifying language; the linguistic evidence reflecting language change within individual societies and in relation to interactions with others at that time; and the combining of a range of evidence to analyse historically, an agro-pastoral society as described in the earliest text, with a comparative input from the archaeology of comparable societies of central Asia. The essays represent four different aspects of the discussions that have gone into the making of what is now called 'the Aryan' and

Aryan culture. It is not the intention of the contributors to this volume to offer definitive arguments but to familiarise the general reader with the broad spectrum of current scholarly discussions. The intention is to set out the complexities, to point out some ramifications of the debate, as well as to suggest how the discussion can be opened to other aspects that for the moment remain distanced. A uniform solution by the authors is not what is being attempted here.

Hopefully this may help the general reader to get a feel of why there is a debate and where it is at.

New Delhi
December 2005

Romila Thapar

1

The Historiography of the Concept of 'Aryan'

Romila Thapar

Early Views

If one seeks for a narrative of the beginnings of Indian history from Indian sources, such a narrative can be found in some of the *Purānas*. Written in the first millennium AD some of these *Purāṇas* claim to refer to events of some millennia earlier. The earth was ruled by Manus and during the time of the seventh Manu there was a great flood when everything was submerged. Manu, advised by Viṣṇu, had built a boat to carry him and the seven sages through the flood. Viṣṇu took the form of a fish, and Manu tied the boat to its horn. The fish swam through the waters and lodged the boat safely on a mountain-top. When the water subsided Manu returned home. The progeny of Manu became the ancestors to many lineages. Later kings seeking aristocratic status traced themselves back to these. Subsequent to these lineages there is a sequential listing of historically known dynasties. The intention therefore is to reflect a degree of historical perception and not restrict the narrative to a recitation of mythology. The myth has its own interest in terms of parallels with similar stories from ancient west Asia (Thapar 1978).

Significantly, this view of the beginnings of Indian history makes no mention of the original ancestors being 'Aryan', in part perhaps because the term 'Aryan' was not an ethnic label. The names in the descent lists of the *Purāṇas* are not listed as Aryan or non-Aryan and the ancestry of some is distinctly uncertain. There was a traditional view therefore, in which 'the Aryan' is absent. This changes however, in the nineteenth century narrative of the past where 'the Aryan' emerges as foundational to Indian history and the central figure of the narrative. This later version draws on a different body of texts, namely the *Vedas*, the earliest of which preceded these *Purāṇas* by about fifteen hundred years. The question then is what is being referred to by the term *ārya* in the *Vedas*, and subsequently in other texts, and how and why has the identity of 'the Aryan' been constructed and what changes has it undergone. This is not an academic question but central to how identities are constantly constructed and changed in every society throughout its history.

The *Vedas* were composed in a period earlier than that of the *Purāṇas*, and were therefore in modern times taken as the starting point of Indian history. Of the four *Vedas*, the earliest was the *Ṛgveda* and its earlier hymns are dated to about 1500 BC. Recently there has been an attempt to revive the theory that the date of the *Ṛgveda* can be taken back to the fourth millennium BC and it can be treated as the literary counterpart of the Indus culture. But this view has not found general acceptance. Apart from major problems of parallels and co-relations with archaeological evidence, this creates a long chronological hiatus between the first and the later three *Vedas*—the *Sāma, Yajur* and *Atharva*—as the dating of these to the first millennium BC remains firm. Further, parts of the later *Vedas* are an exegesis on some Ṛigvedic hymns such that they indicate closeness in time between the earliest and

the later *Vedas*. There is also a geographic shift from the upper Indus plain and its western borderlands which is substantially the location of the *Ṛgveda*, to the Gangetic plain in the later three *Vedas*. The latter three reflect societies in which the contours of *varṇa* as status groups, of economic occupations, of elements of kingship and possibly even the rudimentary forms of state systems, are taking shape.

The Aryan identity was encouraged by the pre-eminence given to the *Vedas* by the brahmanical tradition which also ensured that they became the primary texts for European scholars working on Indian civilisation. But apart from this there was a more evident European context that gave form to the theory about the Aryans as it developed in the nineteenth century.

Officers of the East India Company serving in India began to explore the history and culture of the colony they were governing. This was both out of curiosity about a singularly alien culture that they had begun to govern and out of a conviction that an effective control over society required knowledge of its history, and if the knowledge was not readily available it would have to be discovered. The time was the late eighteenth century when the new ideas of the Enlightenment were in the air. Knowledge, when it was referred to as "the necessary furniture of empire" was viewed as an access to power. Governing a colony required familiarity with the local languages, laws and religions since these were seen as the constituents of its culture. History was defined in accordance with Enlightenment definitions and such histories seemed not to be available in the corpus of Sanskrit literature, regarded as the pre-eminent intellectual corpus of the pre-colonial period. The history of early India therefore would have to be discovered and recorded with an emphasis on tested chronology and sequential narrative.

Interest in these studies was enhanced with the

recognition that there were similarities between Sanskrit and the classical languages of Europe (Jones 1788). This had been referred to in previous centuries by merchants and missionaries visiting India. The most widely quoted among these was an Italian merchant Filippe Sassetti who in the sixteenth century suggested a link between Sanskrit and some European languages. These comments gave way to more systematic studies by Sir William Jones and his colleagues working in various administrative positions of the East India Company and who began researching into Sanskrit and the local languages such as Bengali, Urdu and Hindi in the late eighteenth and early nineteenth century.

William Jones was intrigued by what he saw as parallels between Greco-Roman deities and those of the Hindu pantheon as also by the possibility of comparing Biblical and Hindu mythological narratives to provide chronological clues. But his more lasting work was in the comparative study of languages. William Jones wrote not only on the excellent qualities of Sanskrit as a language but also argued that it was a cognate of Greek, Latin and Persian, and that all of them doubtless had a common ancestor. Sanskrit was not the parent language but it was one among six that probably were descended from an ancestral language. Terms such as 'Aryan' and Indo-European had not yet come into use. The notion of monogenesis—the single origin of all these languages—was extended to the speakers of the languages as well. This slippage between speech and biology was to dominate the nineteenth century.

At Chennai, somewhat later, the work of Ellis and still later Caldwell is associated with analytical studies of Telugu and Tamil (Ellis 1816, Caldwell 1856). The difference between what came to be known as the Indo-Aryan languages and the Dravidian languages was noted by both the British scholars and by those indigenous scholars—the pundits—

who were providing information on Sanskrit and Telugu. What this pointed to was that Sanskrit was not ancestral to all the Indian languages and that the Dravidian group had other roots. Prior to the spread of Indo-Aryan, other languages were used in various parts of the sub-continent as is also evident from linguistic remnants to this day. There was a borrowing between the various groups of languages which is as would be expected where they were being spoken in some proximity. The recognition that there were other languages contemporary with Indo-Aryan such as those of the Dravidian and Austro-Asiatic families, required examining their relationships.

The possibility of comparing languages encouraged the evolution of philology in European universities and it became the forerunner to modern linguistics—the science of language. The Vedic corpus became available in the early nineteenth century to scholars in Europe and furthered the interest in comparative philology. These studies gradually envisaged an Indo-European family of languages descended from an ancestral language. The idea that the identity of speech and of people coincided meant that by the latter half of the nineteenth century European scholarship searched for the homeland of a people, the Indo-Europeans, a search in part encouraged by German Romanticism (Leslie Willson 1964, Drew 1987).

This was given a further impetus by the prevailing theory of discrete civilisations. The world was divided into self-sufficient civilisations demarcated by language and religion. India therefore was the civilisation of the Sanskrit language and the Hindu religion. Sanskrit was said to be the oldest surviving Indo-European language, although the proto-language had to be reconstructed through back formation from the later languages. However, this was an easy step to seeing Sanskrit as the ancestral language as some did and

still do. German Romanticism was partial to this idea. Herder and Schlegel suggested that the roots of human history might go back to the beginnings recorded in Sanskrit texts.

Comparative philologists such as E. Burnouf and F. Bopp were primarily interested in the technicalities of analysing language. Philological studies delved into the grammatical structure of Pāṇini's treatment of classical Sanskrit and this was in some ways new to European linguistic studies. Indo-European, reconstructed from the daughter languages, was traced back to a central Asian homeland. Europe was on the edge of an Oriental Renaissance. It was believed that yet another Renaissance might follow from the discovery of the Orient and this would take knowledge into yet other directions (Schwab 1984).

Those who spoke languages derived from Indo-European, came to be referred to by various labels, but ultimately 'Aryan' became the accepted one by the middle of the nineteenth century. The term was taken from references in the *Ṛgveda* where the authors of the hymns refer to themselves as *ārya*, and from the Iranian *Avesta* where the term *airiia* is used. In neither case was it used in a racial sense. *Ārya* in Sanskrit texts was used as an epithet of status particularly when the language itself became increasingly associated with status. For philologists Aryan indicated a language and therefore meant, 'an Aryan-speaking person'. This was abbreviated to Aryan and came to be applied incorrectly as a racial label.

Association with Race

This interest in the Aryan coincided with the theories of the Comte de Gobineau who was searching for Aryan identities in Europe and warning against interbreeding between what were beginning to be described as Aryan and non-Aryan peoples (Poliakov 1974). Classification according to race was

borrowed from biological studies such as the principles of Linnaeus for defining genera and species, as also the theory of the survival of the fittest, and both were applied to human societies. Races were arranged in a hierarchy of advanced and backward. What has been described as 'race-science' was viewed as an accurate identification of human groups (Stepan 1982). Race shifted the focus of Europe's origins from possible Biblical beginnings to what was thought of as the more 'scientific' understanding of origins in the form of races. In many ways race was invented by European colonialism. The demonstrated success of imperialism and the view that European nations were the most advanced, in contrast to the colonised who were thought of as the lesser breeds, reinforced these identities, as also did Social Darwinism. These ideas acted as a factor in changing the European view of its origins.

The intersection of Europe and Asia, and the resulting philological studies, initially in German and French thought had earlier played with ideas of possible Oriental origins. German Romanticism in the earlier part of the nineteenth century portrayed Sanskrit and Indian culture as encapsulating the noble beginnings of universal civilisation. Sanskrit was described as the parent language and the Aryans of India as the fount of civilisation and from whom there was a dispersal of culture and language to other parts of the world. Asia became the focus of historical investigation.

Parallel to this and in Germany another line of thinking developed. This was influenced by a search for origins and identities in the later nineteenth century. It had been argued that the Roman Empire declined from the fifth century AD because of frequent attacks by the German and other tribes on northern Europe who were regarded as barbarians by the Romans. These attributes of the tribes were gradually changed from their being barbaric to their being heroic and invincible,

creating and defending the kingdoms they established in medieval times in northern Europe. A consciousness of pan-Germanism gradually took root. More importantly, Tacitus, a Roman historian of the first century AD who had written about the purity of blood of the German tribes was frequently quoted (*Germania*, 2; 4). Purity of blood became the criterion of racial superiority. The German tribes were said to constitute the original people, the *urvolk*, and their language was the original language, the *ursprache*. This demarcated them from other communities in Europe where both language and race had been contaminated.

Such ideas were common currency in much of Europe with various communities claiming the status of superior Aryans. The emerging nation-states were not always averse to the claims of Indo-European ancestry in race and language. The experience of colonial empires introduced a certain hesitation if not embarrassment at admitting to a common origin with some of the communities of Asia.

Given this, it was inevitable that the original Aryan would be geographically relocated and made a part of Europe. By the end of the nineteenth century the Aryans were divided into Asian and European. The former had their homeland in central Asia and the latter were said to have originated from the Nordic blondes of northern Europe (Taylor 1889). This was facilitated by the claim that the descendents of Indo-Europeans had diverse skull types as revealed by craniology. The measurement of the cephalic index and the nasal index as indicators of race was to be enthusiastically adopted in India, as for example in the activities and writings of Herbert Risley (Risley 1908).

The equation of language with race was made with increasing frequency. Its presence has also been noticed in the initial reconstruction of the history and civilisation of the ancient Greeks (Bernal 1987). Less credence was given

to possible Mesopotamian and Egyptian antecedents with a preference for treating ancient Greek culture as an Aryan creation, introduced through the conquest of Greece by an Aryan people. From this point on the Aryan became axiomatic to the study of human typology. It was to have disastrous consequences in twentieth century Germany with the Nazi ideology proclaiming the superiority of the Aryan race.

The theory of Aryan race was viewed as foundational to Indian history largely through what has been called the twinning of the theories of British Sanskritists and ethnographers (Trautmann 1997). Max Müller's influential role lay in his projecting Indian civilisation primarily through the prism of what he constructed as the culture of the *Vedas*. He edited the *Ṛgveda* and included the fourteenth century commentary on the text by Sāyaṇa. For Max Müller the *Ṛgveda* was the earliest stratum of Indo-European and therefore the most ancient literature in the world and the key to the earliest language and religion of India. He maintained that there was an original Aryan homeland in central Asia from where there was a dispersal of Aryan speakers branching in two directions (Max Müller 1862, 1883, 1888). One went to Europe and the other migrated to Iran eventually splitting again with one segment invading north-western India. The references in the *Ṛgveda* to the *āryas* and to their hostility towards the *dāsas* were read as the Aryans invading and enslaving the indigenes—the *dāsas*, and eventually settling in India. The reference to *ārya varṇa* and *dāsa varṇa, ārya* and *dāsa* colour, was understood to mean skin pigmentation and seen as a description of fair skinned Aryans conquering the dark-skinned aborigines. Despite his including the commentary of Sāyaṇa, Max Müller paid little attention to the explanations in the commentary. Admittedly these were fanciful at times but nevertheless they do indicate

that there was no reference to race. An awareness of physical difference cannot be equated with racism.

The northern Aryans who are said to have migrated to Europe are described by Max Müller as active and combative and ultimately gave expression to the idea of a nation. The southern Aryans who migrated to Iran and to India were passive and meditative, concerned with religion and philosophy. The two *varṇas* were said to be two conflicting groups differentiated by skin colour, language and religion, underlining racial differences. The *āryas* developed Vedic Sanskrit as their language. The two were segregated through the instituting of caste. The upper caste Hindus were the biological, lineal descendents of the Aryans. The lower castes, untouchables and tribals were descended from the *dāsas*. As was common in the nineteenth century Max Mueller used a number of words interchangeably, such as Hindu/Indian/race/ nation/people/blood, words whose meanings would today be carefully differentiated.

Although in the ancient texts Aryan was specifically a label for a language and a social status, in the nineteenth century it came to be used indiscriminately for a race as well, both in Europe and in India. Max Mueller denied any link between language and race, when he stated that, "Aryan in scientific language is utterly inapplicable to race. It means language and nothing but language ..." (Max Müller, 1898; 90). But there was often confusion between language and race. It was thought that those who spoke the same language were inevitably members of the same biological race. History has proved this to be erroneous. The same language can be spoken by members of more than one race or one ethnic group depending on the historical need for the language. Even Max Müller was given to confusing the two. Speaking on Ram Mohun Roy in 1883, he said, " Ram Mohun Roy was an Arya belonging to the south-eastern branch of the Aryan

race and he spoke an Aryan language, the Bengali... We recognise in Ram Mohun Roy's visit to England the meeting again of the two great branches of the Aryan race, after they had been separated so long that they had lost all recollection of their common origin, common language and common faith" (Max Müller 1984; 11). The sliding from language to race became frequent in contemporary thinking. An equally erroneous equation in South Asia was that of the Dravidian languages with a Dravidian race. The structure of Indo-Aryan and Dravidian languages differed hence it was maintained that they represented a racial differentiation as well. Furthermore, it was held that since Indo-Aryan came from outside, the speakers of Dravidian were native to India.

The reconstruction of what was believed to be Aryan history superseded the initial eighteenth century Orientalist search for Biblical connections and parallels even in the early history of India. There was now briefly, a focus on common Aryan origins with Europe. This included a dismissal of the intervention of the Semitic peoples and languages, both in European and Indian culture. There was such an emphatic focus on the *Vedas* that even the *Purāṇas* were for Max Müller second order knowledge. As we have seen the Puranic version of historical genesis did not involve *āryas* and *dāsas* or any ethnic overtones. The exclusion of the Semitic meant an exclusion of any Islamic contribution to Indian civilisation in the perspective of Max Müller. He refers to the tyranny of Mohammedan rule in India but does not explain why he thought it was tyrannical. This was a statement frequently made by British scholars. It is explained as implying that the Hindus were now rid of oppressive Muslim rule which had been replaced by benevolent British rule for which the Hindus would hopefully show appreciation (Elliot and Dowson, I, xxii).

The equation of language and race was instrumental in

formulating the theory. Aryan conquest was seen as introducing both the Indo-Aryan language brought by people of the Aryan race and also what has come to be described as the distinctive Aryan civilisation. This became the opening narrative of Indian history. It was acceptable to historians who at the time often ascribed the explanation of events to conquest. The theory was attractive to colonial thinking because it provided an antecedent to the British conquest of India and the introduction of what was believed to be an imported civilisation through this process, a view which is partially responsible for the current rejection in some circles of the Aryans being other than indigenous.

It also assisted with another explanation. Racial separateness required a demarcating feature and conquest became the mechanism by which caste hierarchy and inequalities could be explained as a form of racial segregation. Since caste was central to Indian social institutions, racial segregation by this logic played the same role. Caste became more comprehensible if it was explained merely as racial segregation rather than by the more complex theories involving kinship, occupations, rules of purity and pollution and hierarchy. Indian history was gradually being brought into the current European discourse on race.

The idea of the separation of the European from the Asian Aryans entered the discussion when colonial policy drew a sharp distinction between the coloniser and the colonised. The equality of European and Asian Aryans began to be denied slowly. Such a denial was necessary for those who proposed a radical social and economic restructuring of the colony through legislation and administration so that the colony would be converted into a viable source of revenue. Discussion on such matters was current among Utilitarian thinkers, the Free Trade lobby and economists such as Adam Smith. At the same time those who supported

Orientalist views on the Indian past were sympathetic to the theory since it gave added status to the *brāhmaṇas* and to their authorship of the *Vedas*. The *brāhmaṇas* were thought to be the pre-eminent Aryans and this made the segregation of the Aryans from the non-Aryans more evident.

Since the identity and history of 'the Aryans' was said to be foundational to Indian history there was naturally considerable interest in the subject. European interest in the subject had been kindled both by the investigation of new knowledge through comparative philology as well as the politics of race-science in the age of imperialism, ideas that were thought of as relevant to European history as well. The reaction in India was similar and the theory provoked a variety of ways of explaining the beginnings of Indian history. But much beyond that it provoked very diverse views about Indian society and the political outcome of these views was not only apparent at that time but often continues to this day. This had its parallels in Europe. Professional historians did attempt to maintain a distance from the broader implications but inevitably the shadow of the latter occasionally fell on scholarship as well.

The theory was popularised in India through the views of Max Müller. It was also taken up by those working on the early Sanskrit texts such as John Muir (1874) and John Wilson. The latter, as missionaries were critical of the inequities of caste. They now argued that the lower castes who were the indigenous inhabitants were oppressed by the *brāhmaṇas* who were the *āryas* and came as invaders. There was a conflict between the *ārya* and the non-*ārya*. The term *ārya* was used as a patronymic referring to the Aryan people.

Some Indian Views of the Theory

Such views were becoming familiar to many Indians. Among them, a radical turn was provided by Jyotiba Phule whose

perceptions were very different from the concerns of European comparative philologists and supporters of race-science. Writing in the latter half of the nineteenth century in Marathi, Phule argued that the original inhabitants of India were the *ādivāsis*, among whom he included the *śūdras*, *ati-śūdras* and Dalits, all of whom were descendents of the heroic peoples led by the *daitya* king, Bali (G.P. Deshpande 2002). Various such categories were included under the generic title of *kṣatriya*. The *ādivāsis* fought the arrival of the *brāhmaṇas* who represented the Aryans, but were conquered and subordinated. For Phule the 'golden age' was the period prior to the Aryan invasion when *śūdras* were cultivators, land-owners and warriors and had their own culture. The *brāhmaṇas* are said to have deliberately invented caste so that the *śūdras* would be kept permanently servile and divided among themselves. This *brahmana-śūdra* dichotomy reflected the demarcation as it existed in nineteenth century Maharashtra (Omvedt 1991, O'Hanlon 1985). By emphasising the importance of the non-Aryans he used the theory of Aryan race to argue a different original status for the lower castes. The latter were the rightful inheritors of the land whose rights had been wrongfully appropriated by the invading Aryans.

Phule draws on well-known myths to emphasise his point. Thus Bali is deprived of his territory by the deceit of Viṣṇu when he took three steps as agreed upon but so expanded himself as to cover earth and heaven in the three. The loss of territory is also a loss of status. The *brāhmaṇa* Paraśūrāma is repeatedly referred to as annihilating the *kṣatriyas* (G.P. Deshpande 2002; 47 ff). These legends are from the *Mahābhārata* and the *Purāṇas* (Ādiparvan 98.1 ff; *Bhāgavata Purāṇa* 9.15.13 ff) and not from the *Vedas*, nevertheless Phule treats them as early history. The stories of the ten *avatāras* are retold. The earliest Aryans came by ship and were therefore the *matsya* and *kurma*; the later came

by land and were the *varāha, narasimha* and *vāmana*, conquering and killing the *kṣatriyas*.

Phule was not merely concerned with the indigenous origin of the lower castes. He was also a social reformer working towards educating men and women of the lower castes with the intention of providing them with relative independence. The founding of the Satyashodhak Samaj was intended to encourage an awareness among the lower castes of their rights. His views were not entirely supportive of the views of either the colonial opinion or the fast growing nationalism of the late nineteenth century. British administration was seen as less severe than the previous Peshwa regime in Maharashtra of which it was said that it had oppressed the tax-paying lower castes and supported the upper caste money-lenders. Phule's battle was also part of the confrontations which were developing between the *brāhmanas* seen as the ex-Peshwas and the Marathas and Kumbis with their aspirations to power at different levels made possible by the new administration.

Phule's version has become important to the Dalit perspective on Indian history. It was also to influence a number of the non-Brahmin Movements in the peninsula. The dichotomy between Brahmin and non-Brahmin slid easily into the linguistic division of Aryan and Dravidian languages where the former language was of the former group and the latter language of the latter groups. The language demarcation was an important component of the social divide (Ramaswamy 1997). The rejection of Aryan dominance implied a rejection of the Indo-Aryan languages. Phule's interpretation of the theory made caste the differentiating feature rather than race or religion in explaining the beginnings of history. In this interpretation the lower castes had a chronological priority in their identity with the land.

The upper castes had their own use for the theory of

Aryan race and it was again given a turn that suited their social aspirations and political needs. The views of Phule were generally ignored. B.G. Tilak, also from Maharashtra but writing in English, endorsed the antiquity of the *Ṛgveda* by taking it back to 4500 BC, considerably earlier than the date of 1500 BC given by Max Müller. Tilak based his argument on his readings of what he claimed were planetary positions referred to in the hymns (Tilak 1893, 1903). Accepting the theory of the Nordic homeland for European Aryans, Tilak maintained that the Aryans had trekked from the Arctic in the post-glacial age and then branched off, one group settling in Europe and the other travelling to the Indian sub-continent. The European Aryans relapsed into barbarism, but those that settled in India retained their superior original culture which they imposed on the local non-Aryans. The introduction of geology into the argument created other complications. Some time later when objections were raised to Tilak having supported the theory that the Aryans came from outside India, the objections were set aside by some people arguing that in those early times the North Pole was within the territory of British India! (Das 1920). Max Müller was familiar with Tilak's ideas although not in agreement with them, but he did incidentally help in getting Tilak released from jail when he was incarcerated for nationalist activities.

The theory was used by some to argue for the superiority of the upper castes and to promote their self-esteem by maintaining that not only were the upper castes the lineal descendants of the Aryans but that they were also racially related to the European Aryan. Keshab Chunder Sen follows Max Müller and John Wilson when he states that, "... in the advent of the English nation in India we see a reunion of parted cousins, the descendants of two different families of the ancient Aryan race" (Sen, 323). The theory of common

origins strengthened a possible link between the colonisers and the Indian elite. The superiority of the Aryan was an inheritance from nineteenth century theories and is one of the factors in the insistence that the Aryan should be indigenous to India.

Views such as these coincided with the emergence of nationalism in the late nineteenth century articulated mainly by the middle class, drawn from the upper castes. In a period of rapid social change they were seeking both legitimacy and identity from the past. Origins therefore became crucial. Aryan origins and lineal descent was emphasised and appropriated by the upper castes. Other castes and non-Hindus were either marginalised or excluded. Aryanism therefore became an exclusive status conditioned by birth. Biological status was coming back through a circuitous way and the qualification of language was receding. Nevertheless Aryan and non-Aryan differentiation which had been of an ethnic and racial kind was also beginning to touch implicitly on class differentiation.

Nationalisms of various kinds—anti-colonial, religious, regional, linguistic—demand theories of origins and identities, perhaps more insistently than other political movements. These theories resort to their versions of history and particularly the beginnings of history, drawing attention to when a society believes it was founded. Therefore, Aryanism having become foundational to Indian history, new nationalisms reinterpret the theories to support their political aspirations.

The reverse but parallel image as it were of Phule's thesis was that expounded by Dayanand Sarasvati, a *brāhmaṇa* learned in the *śāstras* and who has also been described as a social reformer. He founded the Arya Samaj, an organisation seeking to return to what it interpreted as the social and religious life of the *Vedas*. These texts became the blue-print

of Dayanand's vision of Indian society as set out in his best known work, *Satyārth Prakāsh*. He argued that the *Vedas* are the source of all knowledge including modern science. He underlined the linguistic and racial purity of the Aryans and the Arya Samaj was described by its followers as " the society of the Aryan race." The upper castes were the Aryas. Dalits were excluded, but through the innovation of a ritual called *shuddhi* or purification, it was possible for some lower castes to improve their caste status. The notion of their having to go through 'purification' is an indication of upper caste contempt. Dayanand stated that the Aryans, the authors of the *Vedas* migrated into India from Tibet, although there was no evidence to suggest this connection with Tibet.

Dayanand had parleyed with another group that had firm ideas about the Aryans and the beginnings of Indian history. For a short while the Theosophical Society and the Arya Samaj were virtually merged, but soon they fell apart. Neither Madame Blavatsky and Col. Olcott who founded the Theosophical Society in 1875, nor Dayanand, were exactly people who easily accommodated themselves to divergent views. Madame Blavatsky spent much of her time establishing centres in different parts of the world in order to legitimise her version of the occult. She fostered, however briefly, an interest in current nationalisms such as in Ireland and India. But her more lasting imprint was on centres in Europe that nurtured Ariosophist thinking involved with notions of Aryan superiority. Such centres were often the crucible of Aryan racism (Goodrick-Clarke 1992). In India the more active person was Col. Olcott. He regarded the Aryans as the ancestors of modern Hindus, and as indigenous to India, and stated that these same Aryans had been the progenitors of European civilisation (Leopold 1970, 1974). This was an echo of some of the earlier ideas of German Romanticism in relation to India. Theosophical views emerged out of what

was believed to be an aura of oriental religions as well as the supposed dichotomy between the spiritualism of India and the materialism of Europe.

These varied versions of the theory and the issues that they were concerned with did not die out at the end of the nineteenth century but have lived vicariously through some of the social movements and political ideologies of the twentieth century. For examplé, the notion that Hindus are descended from indigenous Aryans, was earlier expressed in the Theosophical reading of the Aryan theory as argued by Col. Olcott. The theory that the Aryans took civilisation from India to the west is being repeated.

Some authors writing at the popular level in the early twentieth century, redefined the Indian and the Aryan identity to give priority to a religious identity. Caste Hindus were Aryans and Aryans were indigenous to India. Non-Hindus were foreign and these were the Muslims, Christians, Parsis—and the Communists as well. All these were aliens since India was neither the land of their birth—*pitṛbhūmi*—nor the place where their religion originated—*punyabhūmi* (Savarkar 1922, Golwalkar 1938). There had been at one point a collapsing of the racial identity with nationalism and at another a shift from race to caste. The use of the word *jāti* for both caste and race added to the confusion. Although *jāti* is linked to birth it also draws on a variety of social and religious activities which continually change the parameters of *jāti* identity. The racial identity is so deeply ingrained in the modern concept of the Aryan that references to 'the Aryan race' are common in the media and in the conversation of large numbers of people in India. However when the identity shifted to a more clearly religious one as in the equation of Aryan with Hindu, as it has now done, then the meaning of Aryan also changed, although the fuzziness often continues.

This range of interpretations of the Aryan theory

illustrates how it came to be used in the agendas of various social groups and their contestations. It reflects an imagined ethnicity being presented as an explanation for the organisation of a society. The explanation takes on the coloration of scientific approval where biological heredity is made to coincide with categories of language. The history of a nation is sought to be traced with authority vesting in contemporary upper castes or those of the dominant religion. Alternatively a demand is made for the restitution of rights of those who see themselves as having been denied their claim to being the true inheritors of the land. Identities of race, caste and religion underline separateness. They also attempt to provide seemingly easy explanations of social insecurities, however invalid these may be as historical explanations.

The Entry of the Indus Civilisation

These varied versions of the theory faced another set of problems with the archaeological discovery of the Indus civilisation and its cities from 1922-23 onwards. The excavation of the cities of Harappa and Mohenjo-Daro and subsequent excavations in India and Pakistan revealing an extensive urban culture distributed across the Indus plain and into Gujarat, created problems for the earlier simpler version of the Aryan theory. The cities were found to date to the early third millennium and were therefore the culture that initiated Indian civilisation. Being predominantly urban the Indus civilisation is viewed by most scholars as distinctively different from the agro-pastoralists familiar from the *Vedas* and particularly the *Ṛgveda*. The *Vedas* are primarily ritual texts so their depiction of society is indirect. The archaeological evidence, and particularly data relating to environment, technology and economy, covers a wider area and goes further back in time, and because it is an artefact

has precision. It has therefore come to be seen as the primary data for the reconstruction of the earliest history of India. This creates a problem for those who would still like to see the Vedic corpus as the earliest evidence of Indian history. Because these texts were used in reconstructing history prior to the discovery of the archaeological evidence, there is a tendency for the archaeological data to be read in the light of the literary.

The idea of identifying the Indus cities with the authors of Vedic culture was initially put forward by LA Wadell in 1925, working on Sumerian links (Wadell 1925). Other archaeologists thought that the cities may have been built by pre-Aryans and subsequently destroyed by the Aryans. The discovery of the Indus cities was also used, to the contrary, as grist to the mill of Dravidian nationalism claiming that the Harappans were Dravidian speaking and that the civilisational roots of India were therefore Dravidian (Ramaswamy). This remains an undercurrent in the identification of the Indus civilisation. The claim tends to be rather brushed aside by the more vocal insistence on Indo-Aryan roots through identifying the authors of the Harappan Culture with the Aryans who composed the *Ṛgveda*.

In pursuing the various ways in which the Aryan theory was used it is often forgotten that professional Indian historians from the beginning of the twentieth century tended to distance themselves from popular theories. Discussions of Indian views of the Aryans seldom quote historians but frequently quote Aurobindo, Vivekananda, Dayanand and Tilak, who were primarily philosophers and politicians. They are sometimes described as representing the age-old Hindu intellectual tradition, a statement that overlooks the fact that they were essentially arguing within a colonial dialogue. The focus on roots and traditions did not draw on Sāyaṇa and his predecessors but was in the context of various

contemporary nationalisms. The mix of anti-colonialism and religious revivalism varied in these nationalisms. Historians were not claiming to represent a tradition. The classic history by Hemchandra Raychaudhuri first published in 1923, *Political History of Ancient India*, begins with the accession of Parīkṣit, subsequent to the war in the *Mahābhārata*, and there is an association with the supposed start of the Kaliyuga after the war. Almost throughout the twentieth century historians kept a close track on the evidence being revealed by excavations and the reading of the texts : the two technical interests that allowed them to explore historical beginnings.

After the discovery of the Indus cities most histories began by describing them as the starting point of Indian civilisation and then proceeded to speak of a Vedic age as the successor. The rise of the cities were dated to the third millennium BC and the *Ṛgveda* to anywhere between 1500 and 1200 BC. The cultural identity of the Indus cities remained uncertain, but the coming of 'the Aryans' was attributed to an invasion. Max Müller's theory of an invasion was re-iterated by Mortimer Wheeler in his work on the archaeology of the cities. But gradually, the inter-weaving of archaeological and linguistic data—to the extent that this was possible—began to question such an invasion. With historical analysis increasingly approximating the methods of the social sciences, invasion as the invariable cause of historical change was being eroded. The linguistic evidence in particular pointed towards multiple small migrations and other changes in the cultural landscape of those times (Thapar, 1969, 1989-91).

In Europe scholars began to move away from pursuing origins and identities and broadened the parameters of Indo-European studies to include many more societies using languages associated with Indo-European. Although the study of comparative philology continued there was an added

interest in comparative mythology. The exclusiveness of a single language group began to be questioned by the suggestion that there was a recognisable structural similarity and shared ideology across a spectrum of societies using languages of the Indo-European family. This, according to Georges Dumezil was expressed in a common pattern of social organisation which he called the Three Orders—priests, a warrior aristocracy and the pastoralists and cultivators—which was present in the mythology of these groups. Myths reflected the function of each group (Scott Littleton 1973). Although it was demonstrated that the theory of the Three Orders could be applied to non-Indo-European using societies as well, and therefore did not have a specificity relating to a particular language group, it did nevertheless, shift the sights of research to new perspectives. The archaeological hunt for the Aryans became less insistent. But the search for the Indo-European homeland continued. Maria Gimbutas suggested that the kurgan graves of central Asia were associated with the Indo-European speakers (Gimbutas 1997). Colin Renfrew argued for the diffusion of farming communities from Anatolia in preference to horse-riding and chariot using elites spreading from central Asia (Renfrew 1987). Neither of these hypotheses has however, provided an answer.

In India the attempt to co-relate archaeological and textual data took other forms. From the middle of the 20th century when information from excavations was increasing, it began to be juxtaposed to the information of the earliest texts. Initially there was a bifurcation between histories based on the two categories of sources but attempts began to be made to integrate the evidence, which of course was difficult in most cases. The reading of archaeological evidence, as indeed of linguistic evidence as well, has its own rules. This is something that is not always remembered. Furthermore if

the evidence from archaeology differs from that which comes from textual sources the attempt should not be to force a fit between the two but rather to try and understand what the evidence from each may be saying. This also requires that in commenting on these sources we need to be familiar with recent discoveries and interpretations and the rigour of the discipline in question.

The need therefore is to understand the parameters of the Harappan cities and not just to relate stray items of material culture to objects described in textual sources. There are a number of problems that have to be contended with in suggesting a co-relation. The geographical boundaries of the city civilisation extend far beyond those of the *Ṛgveda*, going south to Gujarat. The Indus cities as urban centres were dependent on a substantial agrarian production and agro-pastoral production alone would not have sufficed. A gradual change from village settlement to urban centre can be observed in association with the cities, as for example, in Balochistan. The cities have structures built on extensive brick platforms, impressive fortifications and large familial houses with civic amenities. They were centres of craft production, linked to local and long distance trade. All this required arrangements for obtaining and controlling labour, gathering raw material, organising production and networks of exchange. The symbols on the seals and elsewhere have been taken as indications of a script, used presumably for identifying persons and products. Such parameters are not recognisable in the *Ṛgveda*. This text is a collection of hymns yet even the religious articulation of these find little co-relation with artefacts from the cities (Thapar 1983). However significant and evocative the hymns of the *Ṛgveda* may be, and many are associated with early stages of religious belief and ritual, the societies that can be visualised through them are of relatively small groups of agro-pastoralists, living in

villages, herding cattle and tending fields. Their wealth is computed in horses and cows hence the importance of the cattle-raid as an activity and the frequency of skirmishes probably over pastures and water sources. The horse had enormous functional importance as well as a ritual presence. Movements of people can occasionally be inferred and generally from the north-west towards the Indo-Gangetic watershed (Thapar 2000).

The discussion on the chronological priority and the identity of the Indus civilisation and the Vedic corpus entered standard histories from the middle of the last century. The first volume of the History and Culture of the Indian People, entitled *The Vedic Age*, has references to this discussion. (R.C.Majumdar, et.al. 1951). It was initially a matter of historical interpretation often linked to the juxtaposition of data. But by the last decade of the century some of the discussion began to incorporate political intentions. If now it is to avoid becoming self-defeating, it is necessary that it remain a scholarly debate and that the parameters of historical methodology be observed.

Historical questions regarding Aryan identities are now enmeshed in a variety of cultural politics. The theory of the indigenous origin of Aryans in India was emphasised by a particular Indian nationalism seeking to supersede much of the earlier scholarly arguments. Some of the arguments to support these theories tend to set aside scholarly analysis and focus on the claims being made. But there also is now among some other scholars an attitude bordering on condescension towards these views by arguing that in a post-colonial context theories emerging from such 'nationalisms' must receive attention. Further, that excluding them from discussion is contributing to a sort of Indological McCarthyism where the challenging of long-held assumptions pertaining to the Indo-Aryans are dubbed fundamentalist,

nationalist and contributing to Nazi agendas (Bryant 2001; 276). Are we then to concede to the academic fashions that maintain that all theories of explanation have equal validity and should receive equal attention; or that earlier theories having arisen in a colonial context, contemporary theories coming from 'nationalist' concerns have to be given the benefit of doubt—even if such theories are borrowing from colonial interpretations that now have little scholarly validity? Such concessions are not conducive to advancing knowledge as had been argued persuasively by more than one commentator (Nanda 2003). Nor can the discussion of Vedic origins be reduced to a debate between 'westerners' and 'Indians' as some would have it. This does the debate an injustice. The theory has been used for all manner of purposes by 'westerners' and 'Indians' in the past. At least in present times it is possible to demarcate the scholarly from the non-scholarly pursuit, irrespective of whether the person is a 'westerner' or an 'Indian'. This demarcation should be the crux of the debate.

The two main issues on which the debate has focussed are chronology and identity. But as these essays will indicate much else has come under investigation and has resulted in historically stimulating questions. The chronological question has been whittled down to one, namely, the date of the *Ṛgveda*. The generally accepted view is that it cannot be dated earlier than about 1500 BC on linguistic grounds especially now that comparative studies with contemporary Indo-Aryan and Indo-Iranian texts have been made more precise. The Indo-Aryan words in the Mitanni-Hittite treaty of the fourteenth century BC in Anatolia (also referred to as Proto-Indo-Aryan), and the Gāthā section of the *Avesta*, both have some linguistic forms that are more archaic than the *Ṛgveda*. The date given in the treaty of the fourteenth century BC, is a useful chronological peg.

By this time the Indus cities which preceded the *Ṛgveda* had virtually declined. If there is an insistence that Indian civilisation has to have Aryan foundations then obviously the *Ṛgveda* as the earliest evidence of an Aryan presence has to be either prior to the Indus cities or the Indus cities have to be identified as Aryan. Hence the suggestion that the *Ṛgveda* be dated a couple of thousand years earlier than the date accepted so far and that the language and culture of the Indus cities be taken as Aryan. But for this the evidence is not forthcoming.

Astronomy has been introduced into the discussion on the chronology of the *Ṛgveda*. H. Jacobi argued a century ago for an early date on the basis of what he read as references to planetary positions (Jacobi 1895). Modern aids to assess possible astronomical data have been suggested but without arriving at a conclusive date (Narahari Achar 1999). Recent views have questioned the claim that the Vedic Corpus which has references to the *saptaṛṣi* / Ursa Major in the far north and the *Kṛttikas*/Pleiades in the east, were composed in c. 3000 BC (Witzel 1999, Parpola 1994). Information from much earlier times can get embedded in ritual and through this channel continue into later times, as we know from texts of the historical period. But this does not date the text to an early period. Evidence from astronomy therefore is problematic.

Although the re-examination of the evidence from archaeology has resulted in the discarding of the earlier notion of a systematic destruction of Harappan cities by Aryan invaders, this does not automatically lead to the corollary that the speakers of Indo-Aryan were indigenous to India. Indo-Aryan became the dominant language but the historical process by which this happened still needs to be explored. It was not an isolated language that evolved within the confines of the upper Indus plain. It had close cognates in Iran where

it was also dominant and remained so, and in Anatolia where it faded out. The cultural history of these three regions has a bearing on the presence of Aryan languages in the wider area. The links with Old Iranian and the language of the *Avesta* suggest more than just a linguistic affinity with Indo-Aryan. It has long been pointed out that parallels from Iran occur in rituals, deities and social forms but many carry a reversal of meaning. This suggests an initial cultural closeness with a later demarcation. The interaction of peoples, even small groups through their languages and cultures, over a period of time that extends into centuries, brings it own mutations. The demarcation possibly led to the language and concepts of Old Iranian and Indo-Aryan mutating independently in different habitats. Small migrations over long durations are not as visible as are massive movements but all the same they can be effective mechanisms of change.

Languages travel and are picked up or discarded for a variety of reasons arising from complex relationships. Exchanges of various kinds and the movements of peoples that this implies, however small in number, are means of transactions that are not always obvious. Pastoral circuits for example, can involve large herds of animals, fewer humans but a regularity of contact that could well bring about exchange and bilingualism. Historians have to consider typologies of exchange, migration, technology, and relationships that occur particularly in the borderlands between well-defined regions, such as those on either side of the Indo-Iranian borderlands. Archaeological data can sometimes provide clues to these if stray artefacts suggest exchange or movement. Even if it is argued that Indo-Aryan was indigenous to India, (although the viability of the argument still remains to be established), the evolution of the language in terms of why it incorporated other linguistic forms from other indigenous languages needs to be explained.

The fact that the Harappan trader, irrespective of what his own language might have been, had to speak a variety of other languages in the many areas where he traded, would have had some affect on his own language.

Single items in themselves do not necessarily tell us much. There has been considerable discussion on identifying the earliest horse bones in north-western India. Perhaps we forget that a handful of horse bones scattered at various sites do not add up to a culture centred on the horse. The difference even in the numbers of bones between those found in Late Harappan levels and those found at sites of the first millennium BC, is a significant indicator of which cultures were centred on the horse.

Further Aspects for Investigation

There are many summaries of existing opinions—short and long—and these keep getting repeated without too much attempt at considering new perspectives. This might suggest that leads of different kinds should be followed up instead of just the ones we are familiar with. The debate on origins and identities can be investigated through other aspects of the history of this period.

Potentially important recent archaeological discoveries have been the excavations of the Bactro-Margiana Archaeological Complex—BMAC—or what has been called the Oxus Civilisation, stretching from the Caspian to the Pamirs and active in the period from 2300-1900 but less active in the subsequent period until 1500 BC (Sarianidi 1999, Francfort 2005). The BMAC had links with the Iranian plateau, Balochistan and the Indus borderlands, and the Steppes of central Asia. It was one of the early crossroads of Asia. It was partly contemporary with the period of the Harappan cities and had its own urban centres in its oases. Some items produced here as prestige goods travelled to

Balochistan, Iran and the borderlands nearby. Anatolia would also have been accessible. Were these items of trade or were they items of gift exchange, since either would make a difference to the nature of the relationships involved in the exchange? Connections are also attested by the location of a Harappan settlement at Shortughai. The period of decline of the BMAC coincides interestingly with the decline of Harappan urbanism and changes in the wider area which had earlier been linked. Despite its proximity to cultures thought to have been Indo-European speaking, it remains unclear whether the BMAC used an Indo-European language since written records have not been found.

The decline in exchange between the urban centres may have encouraged a more marked presence of agro-pastoralists —a pattern not unfamiliar to later history (Fussman 2005). Their presence is evident from textual sources dating to the period when the BMAC was not so active. The Gāthā sections of the *Avesta* are now said to be much earlier than had been assumed (Kellens 2005) and a date of the mid-second millennium BC would pose no problem. The language is thought to be more archaic than that of the *Ṛgveda* as is also the language of the Mitanni-Hittite treaty of the fourteenth century, although both the latter two are Indo-Aryan. The language of the treaty has been described as Proto-Indo-Aryan. There are some echoes of the movement of peoples and perhaps languages in later Avestan references to the lands created by Ahura Mazda and associated with the *airiia*. These are listed from the northern-most, Airayana-vaego, coming south to Helmand and eventually to Hapta-Hindu / Sapta Sindhu and elsewhere (Darmesteter, *Vendidad*, Fargard I. 4). Pastoral groups may have been part of a central Asian cultural nexus which in the course of segmenting and moving also manifested local differences. The widening of pastoral circuits and the resulting interface with new societies and cultures

would have affected the forms and structures of the earlier society. Ecological similarities would have encouraged diffusion but unfamiliar environments would have created some diversity. What were the factors that encouraged the widening of the pastoral circuits, if that is what happened? Was it a search for pastures and fresh water sources in a possible period of drought? Was it a demographic alteration? The relations between the societies of the *Avesta* and the *Ṛgveda* can be meaningfully explored to search for answers to such questions as can the archaeology of the regions familiar to these societies.

It is perhaps worth reminding ourselves that there were no political borders in those days and movements across geographical borderlands were not controlled by political boundaries. The boundary of the territories of British India cannot be the criterion for what is indigenous and what is alien to India. The presence of material objects in the archaeological record and their chronologies and distribution define cultures, as does the linguistic structure of the languages of the texts and the geographical direction taken by language and textual sources. Non-Indo-Aryan linguistic forms in the *Ṛgveda* (MM Deshpande 1979, Kuiper 1991) register contact between speakers of various languages. The types of linguistic importations could point to activities associated with specific languages and their speakers. It was suggested that tools used in agriculture tend to come from non-Indo-Aryan languages, such as Dravidian or/and Austro-Asiatic (Burrow 1973, 373 ff; Kuiper 1991). A fuller investigation of this might provide some worthwhile explanations of the social interface.

There needs to be a sharper definition of concepts such as chiefships and kingships as applied to the history of these times. The activities of the *rājā* in the *Ṛgveda*, for instance, agree more closely with those of a chief of the clan rather

than a king. The institutions associated with chiefships such as *samitis* and *vidathas* are not characteristic institutions of kingship; and *sabhās* are different kinds of bodies in the two systems (Thapar 1984, 2000). The differentiation can also be sought in the sites where material could indicate differences. Urbanism is a distinctive change from previous settlements. Proof of urbanism requires evidence of many aspects of its functions—economic, administrative, and social to say the least-—as is apparent from the excavations of the Harappan cities. It does not lie in maintaining that the word *pur* as it occurs in the *Ṛgveda* has the same meaning as *pura* which occurs in later texts.

The sharpening of definitions of the forms of authority would require other data such as the juxtaposition of pastoralism and agriculture and the nature of reciprocal exchange. Did the juxtaposition for instance, where the pastoralists and the farmers had a symbiotic relationship with animal herds grazing on the harvest stubble, bring about the borrowing of linguistic features from one language to another? Chiefdoms rely more on exchange of various kinds being reciprocal where items exchanged need not be identical but their evaluation is seen as equivalent. Kingdoms tend to rely more on nurturing dominant groups which help in controlling subordinate groups. The hierarchy of power is more complex. The seemingly egalitarian distribution of booty among clansmen after a raid, with some concession to a more substantial share for the priest and the raja, would be gradually replaced by wealth resulting from the induction of labour in production rather than raids. This would change the nature of relationships. A statement such as, the *kṣatr*, personifying power, eats the *viś*, the clansmen, in the same way as the deer eats grain, is obviously saying something about the system of control and not merely making a comparison (*Śatapatha Brāhmaṇa*, 8.7.1.2., 8.7.2.2., 9.4.3.5.).

The monitoring of changes such as these could be co-related with change in language or material culture.

The historical reconstruction of this period now presents a different picture from earlier theories. The identification of archaeological cultures as 'Aryan' without the evidence of writing was methodologically doubtful and has now become more so. There is no necessary co-relation between language and archaeological artefacts, although there can be parallels between objects mentioned in texts and those found in excavations. Even in periods when the languages of dispersed areas are related, as in the case of Indo-Aryan in northern India and its cognates in Anatolia and north-east Iran, the material culture of the societies speaking these languages is dissimilar.

The notion of an Aryan race was enhanced in the past by reference to the use of an Aryan language. The notion of an Aryan race has been discarded for the last fifty years. Language and race are distinctly different categories. It would be more correct to use the label of Indo-Aryan when referring to the language, and to use Aryan as *ārya*, as it was used in the past, to qualify those observing certain social and linguistic norms. The overlay of nineteenth century theories and the more generalised current debates has merely confused its usage. How and when the Indo-Aryan language became current in the upper Indus plain now requires investigation in the context of the linguistic forms that it has incorporated from other contemporary language groups. These are forms that exist only in Indo-Aryan and not in the other languages with which it was most closely associated in Iran and Anatolia (Emeneau 1954, Mehendale 1993). Had Indo-Aryan spread from the Punjab to Iran and Anatolia, then these borrowings should have been present in the language of the *Avesta* and the Mitanni-Hittite treaty (Mallory 1989). The spread of the Indo-Aryan language within the sub-continent was a

continuing process in Indian history. It was introduced for specific functions in addition to local languages. The mechanisms involved in this could provide clues to the earlier process. The links and connections between societies across the Indo-Iranian borderlands could be examined through the evidence of artefacts travelling distances as well as linguistic changes among those using related languages.

This would suggest that we look for a graduated interaction over many centuries among the players who created these societies and cultures. There is little evidence for large scale violent conflict and constant warfare despite the Harappan cities being fortified. Why were elaborate fortifications necessary or was it assumed that they were somehow necessary to urbanism? The subsequent *Ṛgveda* describes inter-clan hostility, but on a small scale, sometimes among the *ārya* clans and sometimes between the *āryas* and the *dāsas*. *Ārya* priests performed rituals for *dāsa* chiefs even if their characteristic worship was different. The nature of these relationships could be fine-tuned. Texts on ritual exegesis associated with the *Ṛgveda* refer with respect to the *dāsi-putrāḥ brāhmaṇas*—even if they were the sons of *dāsis*. This would query the simplistic understanding of caste as *varṇa* and applying the norms of the later *dharma-śāstras* to earlier times. It would seem that the relationship was more ambivalent than has been granted so far (Kosambi 1950, Thapar 2000) The adoption of *dasyus* and those outside the social pale into caste status also contradicts previous notions of Aryanism. (*Aitareya Brāhmaṇa* 7.18)

The centrality of the Vedic texts for later history has been largely treated as the continuity of ritual and belief systems. As religious texts they were highly respected in some circles and said to be divine revelations whereas others did not take them to be so. Eventuality the popularity of Puranic Hinduism, which introduced rituals and belief systems from

various other sources, superseded the centrality of the *Vedas* except among the topmost caste. For some philosophers and their large followings such as those of the Shramanic sects of Buddhists, Jainas, Ajivikas, and such like, the *Vedas* had been the starting point of intellectual questioning, leading to a departure from such beliefs and practice. This continued with lively confrontations, some compromises and some vitriolic exchange.

The evidence of social change in these texts has received less attention. Why some clans and castes come to dominate and others are subordinated in this period, have implications for social history. Hierarchies, differentiations and regulations are part of the social process in complex societies and evolve in localised exchanges. They cannot be explained away by resort to the presence of conquerors as they were in earlier studies, nor by being described as indigenous and therefore harmonious. Local hierarchies also undergo mutation. But when there is an insistence on making a system universal, such as the imposition of caste rules over extensive areas, then it has to be assumed that this reflects historical changes of a substantial kind, involving a diversity of groups not all of whom were in agreement. Where a range of groups have to be incorporated into positions of status, there ethnic origins may well have been set aside in favour of imposing a language and social norms. Language, inherited or learnt would be a crucial indicator. Notions of what is indigenous and what is alien are neither permanent nor unchanging nor transparent. The identities of the indigenous and the alien constantly mutate throughout history and the mutation indicates a historical change.

The *Vedas* when treated as sources of history have to be subjected to the same analyses as all other sources. They are questioned in terms of who composed them, for what purpose, who's views do they reflect, and so on. It is

significant that the hymns of the *Ṛgveda* as we have them now only in the recension of Śākalya were composed not all at the same time but over a few centuries. Therefore some change would be registered in the context of the early hymns as compared to the later. Social history would involve investigating the organisation of the various groups referred to as well as their rituals and their technologies and economies. A listing of items mentioned is not enough for it requires an assessment of the broader frameworks of social and economic functioning.

The application of the Aryan theory to Indian history began as an attempt to uncover the beginnings of Indian history, to explain the origins of Indian society and to establish what were thought to be the roots of Indian identity. This historical enterprise has on occasion become entangled with politics, both colonial and national, and possibly now, in the literally post-colonial formulation of both. The emphasis on defining a particular kind of Aryanism as foundational to Indian civilisation is not a radical indigenous interpretation of history as is claimed. It is a revival of certain kinds of nineteenth century colonial historiography but now moulded by the more specific ideological concerns of contemporary time and place. In the past the theory has been used by many as an agency of empowerment and entitlement to include some and exclude others. This in itself cannot be curtailed since resort to history—particularly ancient history—has been part of the agenda of various nationalisms and imperialisms and continues to be so in some cases. Nevertheless, historians, archaeologists, specialists in linguistics and in other disciplines that bear on the subject, need to be constantly in a scholarly dialogue so as to assess the validity of the theories being suggested. Such verifications are also signposts for the interested general reader.

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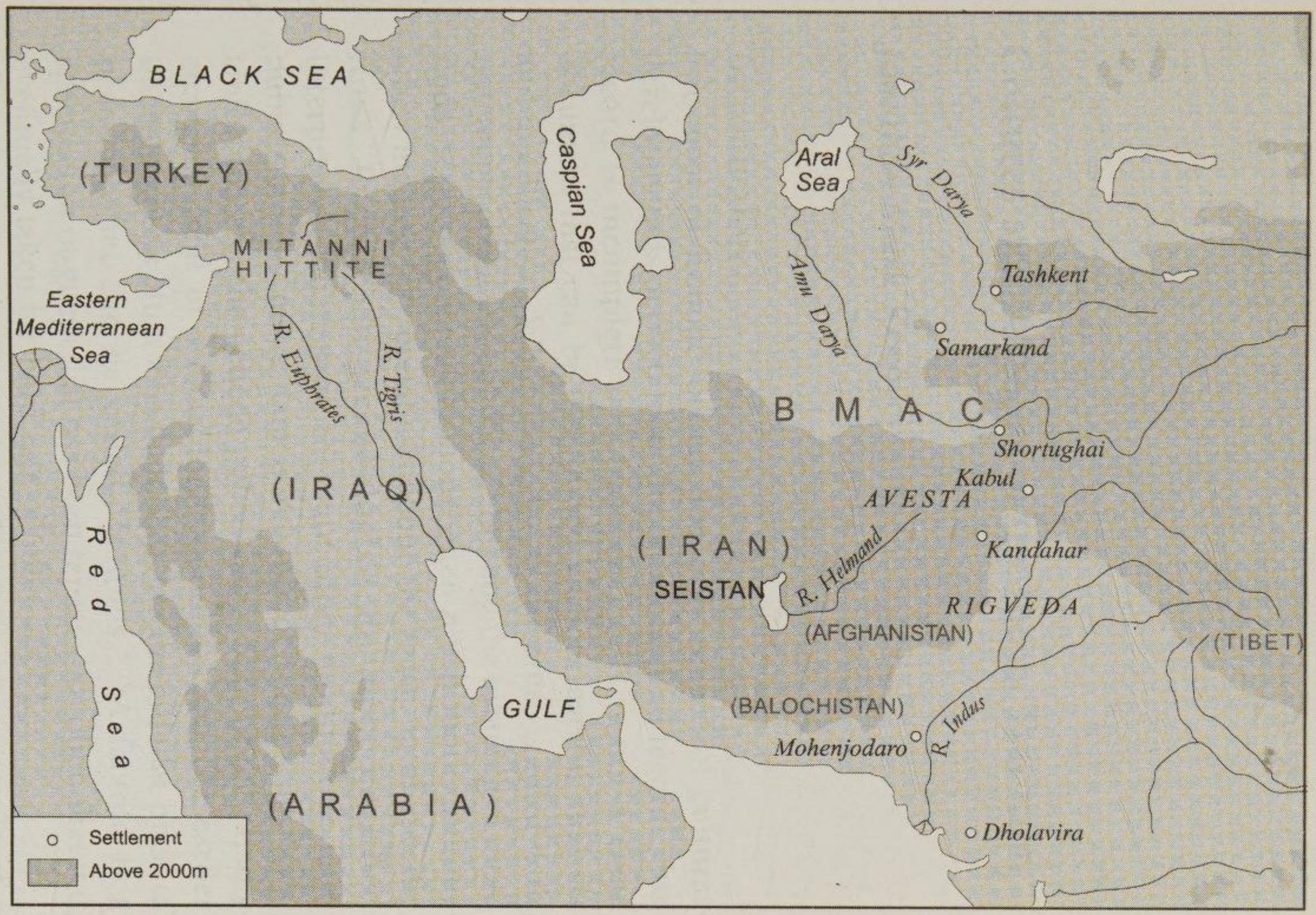

BLACK SEA
(TURKEY)
Caspian Sea
Aral Sea
Syr Darya
MITANNI
HITTITE
Eastern Mediterranean Sea
R. Euphrates
R. Tigris
Amu Darya
Tashkent
Samarkand
B M A C
Shortughai
Kabul
AVESTA
(I R A Q)
(I R A N)
Kandahar
SEISTAN
R. Helmand
RIGVEDA
(AFGHANISTAN)
(TIBET)
Red Sea
GULF
(BALOCHISTAN)
R. Indus
Mohenjodaro
(A R A B I A)
Dholavira
Settlement
Above 2000m

2

Cultures and Societies of the Indus Tradition

Jonathan Mark Kenoyer

Introduction

For most of human history, the only record of cultural development is derived from the archaeological record. This record is incomplete and fragmentary. It is not a clear document that can be interpreted without careful analysis and qualification. While the popular literature is filled with statements about ancient discoveries and the meaning of these finds, serious archaeologists are often much more cautious when making interpretations about the meaning of specific finds. Even when archaeologists do make qualified interpretive statements, they are often modified in later publications as more data is recovered from excavations. Unfortunately, the general public rarely follows the rapidly changing field of archaeological studies, and the earlier interpretations often find their way into the popular press to become what can be called "factoids." "A factoid is a speculation or guess that has been repeated so often that it is eventually taken for hard fact" (Yoffee 2005).

The concept of an "Aryan" race is one example of a "factoid". The term "Aryan" is derived from the term "ārya"

found in the *Ṛg Veda* and meaning "good or noble, someone who speaks Sanskrit, someone who practices the proper Vedic rituals" etc. (Renou 1959). When linguists tried to understand the relationship between the Sanskrit language and other classical languages such as Latin and Greek, they coined the word Indo-European, to refer to a large family of related languages that spread from India to Europe (Mallory 1989; Renfrew 1987). Sanskrit, the language of the *Ṛg Veda* and later texts, was considered a sub-branch of Indo-European languages and was classified as Indo-Aryan, while the language of the *Avesta* was called Indo-Iranian. All languages derived from Sanskrit have been classified as Indo-Aryan languages. The speakers of Indo-Aryan languages came to be referred to as Aryans. Unfortunately the term Aryan soon lost its meaning relating to language and came to be used incorrectly as a term for genetically distinct populations or races. This use of the term "Aryan" as a classification of a person's genetic heritage is totally misleading and factually incorrect, because a person's language does not always correlate to their genetic ancestry. Today, people throughout the world speak English, but only a small segment of the population is genetically related to English speaking ancestors.

Another example of a "factoid" is the destruction of Mohenjo-Daro by so called "Aryan" invaders. Although this idea had been proposed by earlier scholars (see R. Thapar this volume) Sir Mortimer Wheeler's highly speculative statements regarding scattered skeletal remains found in the late levels of Mohenjo-Daro (Wheeler 1953) were taken as being archaeological proof of this invasion and the theory became widely accepted in both scientific and popular writings. After assuming that Harappans were non-Aryan, and that the *Ṛg Veda* dated to around the fifteenth century BC. Wheeler presented various Vedic descriptions of the

destruction of walled cities by Indra, who is also known as *purandara*—"fort-destroyer". In describing the skeletal remains found at Mohenjo-Daro, he assumed that the individuals died violent deaths and that the absence of skeletons in the citadel areas of the site was due to the fact that invaders cleared this area to live in after sacking the city.

He concluded with the speculation "On circumstantial evidence such as this, considered in light of the chronology as now inferred, Indra stands accused. Alternatively, if we reject the identification of the fortified citadels of the Harappans with those which he and his Vedic Aryan following destroyed, we have to assume that, in the short interval which can, at the most, have intervened between the end of the Indus civilization and the first Aryan invasions, an unidentified but formidable civilization arose in the same region and presented an extensive fortified front to the invaders. This second assumption is more difficult than the first; it seems better, as the evidence presents itself to accept the identification and to suppose that the Harappans in their decadence, in the sixteenth or fifteenth century BC, fell before the advancing Aryans in such fashion as the Vedic hymns proclaim." (Wheeler 1953:92).

In a more comprehensive overview of the archaeology of Pakistan and India published five years later, he had totally changed the tone of his interpretation. He described the decline of the cities as long and drawn out, resulting from deforestation, flooding, and the wearing out of the landscape. He still assumed that the site of Mohenjo-Daro was attacked by raiders, and suggested that they may have been linked to the Rig Vedic accounts of the destruction of cities, but clearly states that "...at present these thoughts are no more than conjectures; picturesque, perhaps provable, but not proven." (Wheeler 1959). He also points out that "... so-far-flung a

society decayed differently and found death or reincarnation in varying forms from region to region." (Wheeler 1959).

Dr. George F. Dales strongly refuted Wheeler's claim of invasion by clearly demonstrating that the skeletons did not belong to one single period and there is no archaeological evidence for destruction, burning or looting of the city that would normally accompany a massacre (Dales 1964). Furthermore, reanalysis of the skeletal remains from Mohenjo-Daro by Dr. Kenneth Kennedy indicate that only one out of the 42 different individuals shows any evidence of trauma that could have been the immediate cause of death (Kennedy 1984). The archaeological and skeletal evidence clearly do not support any model of invasion or sudden collapse of Mohenjo-Daro, let alone the Indus urban culture as a whole. The decline of Mohenjo-Daro is no longer attributed to Indo-Aryan invasion or migrations, disease or floods, as proposed by earlier scholars, but rather to a combination of factors that include the changing river system, the disruption of the subsistence base, and a breakdown in the important integrative factors of trade and religion (Kenoyer 2005; Possehl 1997).

Unfortunately, such refutations and later clarifications have been ignored by secondary authors and the general public, resulting in major misunderstandings about the nature of archaeological interpretations and the value of archaeology as a scientific study of early human society. For the past fifty years, archaeologists, linguists and historians have been arguing about the nature of the earliest cities of the Indus valley and their relationship to later cultures mentioned in the oral traditions that eventually became codified in the *Vedas* and later texts.

In this essay we will first look at the types of questions that can be answered by the mute archaeological record followed by a brief summary of the current state of knowledge

regarding the ancient cultures of northwestern South Asia, during the time period from around 3000-1000 BC.

Archaeological Approaches

Who were the peoples living in the ancient Indus valley and surrounding regions during the prehistoric period? Where did they come from? What language did they speak and what were their religious beliefs? Can these communities be linked to the *Vedas* or even to later Epic texts? These questions have been challenging archaeologists, historians and linguists ever since the discovery of Harappa and later Mohenjo-Daro in the 1920s and are still at the forefront of discussions today.

The people living in the prehistoric Indus valley and surrounding regions can only be defined on the basis of the archaeological remains that they left behind. This means they are described by their pottery, the types of houses they lived in and the food that they ate. Their origins can be roughly correlated by tracing the development of specific artifact types and tracing the distribution of these artifacts across space (Kenoyer 1998). More recently, studies of the ancient skeletal remains provides clues as to the genetic relationships between the people of the Indus region and other areas of the ancient world (Hemphill and Lukacs 1993). Eventually the study of prehistoric DNA may shed new light on the genetic relationships of specific populations, but so far no well-preserved DNA has been discovered. Even when we do figure out how to trace DNA in ancient populations of South Asia, it will not be possible to use this data to determine the language or religious beliefs of the people that are being studied.

The most difficult aspects of prehistoric archaeological research and interpretation revolve around issues of language and religion. Language and religion are not passed on genetically but are learned behavior that does not always

correlate with genetic heritage. Furthermore, without the aid of written records, it is impossible to determine the language used by a prehistoric community. Although we have written records during the period of the Indus cities, the writing has not been deciphered and the language that they represent is unknown (Parpola 1994). Without decipherment, it is not possible to make positive correlations about the meanings of specific symbols or the use of particular artifacts in the context of religion. This dilemma has been the source of considerable discussion and dispute regarding the language and religion of the ancient urban culture of the northwestern subcontinent that is commonly referred to as the Harappa culture, Indus Civilization or the Indus-Saraswati Civilization.

The term Harappa Culture derives from the initial identification in 1920 of artifacts at the site of Harappa, located along the Ravi River in modern Pakistan (Vats 1940) (Figure 1). Harappa is known as the "type-site" for this culture and archaeologists traditionally use the type-site where artifacts are first discovered to refer to the cultural tradition as a whole. With the discovery of similar artifacts from the site of Mohenjo-Daro in 1921 (Marshall 1931), and subsequent discoveries throughout the Indus valley, many archaeologists began referring to the Indus Civilization or Indus Valley Civilization, which includes the Harappa Culture (Wheeler 1968). Eventually, sites dating to this same time period and cultural tradition came to be discovered outside the Indus valley, in the highland regions of Baluchistan and Afghanistan, as well as in the territories of Gujarat and Kutch. This led to the introduction of the term "greater Indus Valley" to refer to the larger area encompassed by this civilization (Mughal 1970).

Some scholars in India have begun to use the term Indus-Saraswati or Saraswati Civilization (Gupta 1996; Lal 1997).

The use of this name is based primarily on the misconception that a significant or even greater proportion of the ancient "Indus" sites were situated along the bed of the now dry Saraswati-Ghaggar-Hakra-Nara River. In fact, most sites along the dry river channel are relatively small and even the few large ones are not as large as the major cities on the Indus or its tributaries. The discovery of these sites is mainly due to the rapid abandonment of the region after the river began drying up during the Late Harappan period. The lack of later occupation and the fact that no more silts were brought down with annual floodwaters has left these sites exposed and therefore easily identified by archaeologists. In contrast, the Indus settlements in other parts of the Punjab, Sindh and Gujarat have been buried by annual flood sediments or by later historical villages and cities.

Regardless of what terminology is used, the characterization of this society is based on the recovery of archaeological evidence alone, as the Indus writing has not yet been deciphered. Archaeologists must use a combination of resources to interpret the incomplete archaeological record. Scientific analysis is used to interpret the nature of specific materials, the technologies used to produce them. Geological models are used to interpret the ways in which the ancient artifacts have been preserved in the soil, and complex archaeological models are used to reconstruct the overall layout of a settlement, the subsistence, and eventually the social and political organization of the people living there. Ethnographic models based on studies of living or historical communities are used to help provide examples of the overall structure of an ancient society. However, none of these approaches can provide a totally accurate or complete picture of an ancient society, since the archaeological record only preserves a small proportion of the original society.

This is also the situation with literary texts, which

generally only provide one perspective on an ancient culture, composed or written by a minority of literate elites. Using such written records it is equally difficult to accurately reconstruct a total picture of the society. This situation is abundantly clear in the numerous interpretations of the meaning of specific words found in the *Ṛg Veda* and later Vedic texts, as well as the well-known epic texts, the *Mahābhārata* and the *Rāmāyaṇa*. These texts were not intended to be used as historical documents and yet many scholars have tried to use them to reconstruct ancient Vedic society and to link specific events or localities to the fragmentary archaeological record.

There is little question that many of the events and localities described in the Vedic and later texts can be associated geographically with the greater Indus Valley and adjacent regions. The challenge then is to develop a systematic method of testing the archaeological data to see what, if any, can be associated with the Vedic literature. Using a scientific approach one does not attempt to prove a proposition or hypothesis, but rather to disprove it. If the hypothesis cannot be disproved, then it may represent a valid interpretation.

For example, one of the major characteristics of being "ārya" in the *Vedas* is being able to perform rituals using proper mantras spoken in Sanskrit (Renou 1971). In order to determine if an archaeological site were inhabited by "ārya" it would be first necessary to demonstrate that they had ritual fire altars as well as determining that the language spoken in the course of the fire rituals was indeed Sanskrit. Since we do not have any written language during the Vedic period, and there are no tape recordings of the languages spoken over an ancient fireplace, it is not possible to test if the fireplace was in fact a fire altar or what type of language was spoken. If it is not possible to test a hypothesis, then it cannot

help to increase our knowledge of the past. Hence the identification of simple "Vedic fire-altars" at a site is simply a speculation that cannot be tested.

Similarly, there are many horse using cultures in the ancient world, but the presence of a horse does not mean that the people who used the horse are "ārya". The use of the horse spread quite rapidly (Anthony 1997), and by 1500 BC horses and chariots were used by elites in a vast area spreading from Egypt to China, and yet no one would argue that Egyptians or Chinese elites were Vedic Aryans. Consequently, the presence of horse bones in a site does not in itself indicate the language or religion of the community using the horse. In order to determine if "ārya" communities used horses it would be necessary to find evidence of horse sacrifice as described in the *Ṛg Veda*. So far no such remains have been discovered in South Asia.

Another example is the use of symbols such as the swastika. This is a symbol that has been found distributed throughout the world beginning in the Palaeolithic period. It is found on pottery in Mesopotamia dating to around 4000 BC, at Harappa beginning around 3300 BC (Kenoyer and Meadow 2000) and widely used in the Indus cities from 2600-1900 BC (Kenoyer 1998). The presence of the swastika in Mesopotamia and the Indus valley is not necessarily connected in any cultural or religious way, but is evidence of independent invention of a symbol that probably had very different ideological meanings.

It should be clear from the preceding examples, that the unbiased documentation of the archaeological record is critical to providing a sound description of prehistoric communities. Furthermore, the connection of prehistoric communities with later literary texts or historically known communities must proceed with great caution, and that all interpretations must be taken as suggestions and not as facts.

In the following section I present a summary of the theoretical framework that I feel is most appropriate for incorporating and explaining both the archaeological and the literary evidence from South Asia.

Chronology and Cultural Traditions

Most traditional archaeological studies of the prehistoric and protohistoric period of South Asia use a linear sequence of periods and events to categorize and discuss the continuities and change in human adaptive strategies. While this approach is still used to some extent to describe the chronological changes within a site or a region, the overarching concept of a "Cultural Tradition" is used in this chapter to encompass long-term cultural developments in a specific geographical region (Kenoyer 1991; Shaffer 1992). While this terminology may be unfamiliar to many readers, it is the most appropriate model because of the nature of archaeological data and dating techniques. The attempt is to provide a focus on the major activities of societies at particular periods. The reference therefore is not just to a chronological bracket but also to how a society was organized and why it was so.

Each "Cultural Tradition" can be subdivided into Eras and Phases that allow archaeologists to organize and compare materials from different chronological periods and geographical regions. The term Era as used in this model designates a unit of analysis that does not have uniform fixed boundaries in time or space and more than one Era may co-exist within a Tradition. The Era is not a developmental phase and not all are found in every tradition. A Phase is the smallest analytical unit, defined by ceramics, architecture and a variety of artifact styles, is limited to a locality or a region and to a defined period of time.

Foraging Era refers to the subsistence focus on wild plants and animals. This era includes mobile and sedentary

foragers, including communities involved in hunting and fishing. Early Food Producing Era has an economy based on food production but lacking ceramics. In the Regionalization Era, distinct artifact styles (e.g. ceramics) cluster in time and space (without fixed boundaries) and are connected by regional interaction networks. The Integration Era shows pronounced widespread homogeneity in material culture, reflecting intense interaction between social groups. The Localization Era has general similarity in artifact styles (comparable to the Regionalization Era), indicating a continued, but altered, presence of interaction networks (Shaffer, 1991: 442).

Within each Era, Phases can be defined on the basis of tool technologies, pottery and other types of artifacts, writing and architectural styles. A Phase is the smallest analytical unit, limited to a locality or a region and to a relatively short interval of time. All of the Traditions and Phases are linked directly or indirectly though avenues of communication and trade. These Interaction Systems are reflected by broad distributions of cultural traits within a brief period. Traditions and Phases are not totally distinct phenomena because of their interconnections through economic, social and ritual interaction systems.

Three major Cultural Traditions can be identified for the northwestern subcontinent during the period under consideration: the Indus, Baluchistan, and Helmand Traditions. The Bactro-Margiana Tradition falls at the northwestern edge of South Asia and is linked in different ways to processes of cultural and political developments in the subcontinent, beginning as early as the Palaeolithic and continuing through the Early Historic period.

Cultural developments in other regions of peninsular South Asia have generally been discussed in terms of single sites or small regional cultures based on limited surveys and

excavations. In order to integrate these oftentimes confusing sets of data into the framework used in the northwestern regions, it is possible to identify three additional cultural traditions for peninsular India; the Ganga-Vindhya Tradition, the Malwa Tradition and the Deccan Tradition.

Each of these traditions is represented by various Eras and Phases, and all of them are linked during their respective Integration Eras to the overarching Indo-Gangetic Tradition. This final Tradition has been defined for the northern subcontinent during the second major phase of urbanization—that of the Indo-Gangetic plain—and is basically synonymous with the Early Historic Period, starting from the mid-first millennium BC.

Using this chronological and theoretical framework it is possible to describe the cultures emerging in the northwestern regions of South Asia without getting buried with all of the data (Figure 1). Brief overviews of the Indus and the Indo-Gangetic traditions are presented below.

Table 1

Indus Tradition: Basic Chronology

Foraging Era	10,000 to 2,000 BC
Mesolithic and Microlithic	
Early Food Producing Era	7,000 to 5,500 BC
Mehrgarh Phase	
Regionalization Era	5,500 to 2,600 BC
Early Harappan Phases	
Ravi, Hakra, Sheri Khan Tarakai,	
Balakot, Amri, Kot Diji, Sothi,	
Integration Era	2,600 to 1,900 BC
Harappan Phase	
Localization Era	1,900 to 1,300 BC
Late Harappan Phases	
Punjab, Jhukar, Rangpur	

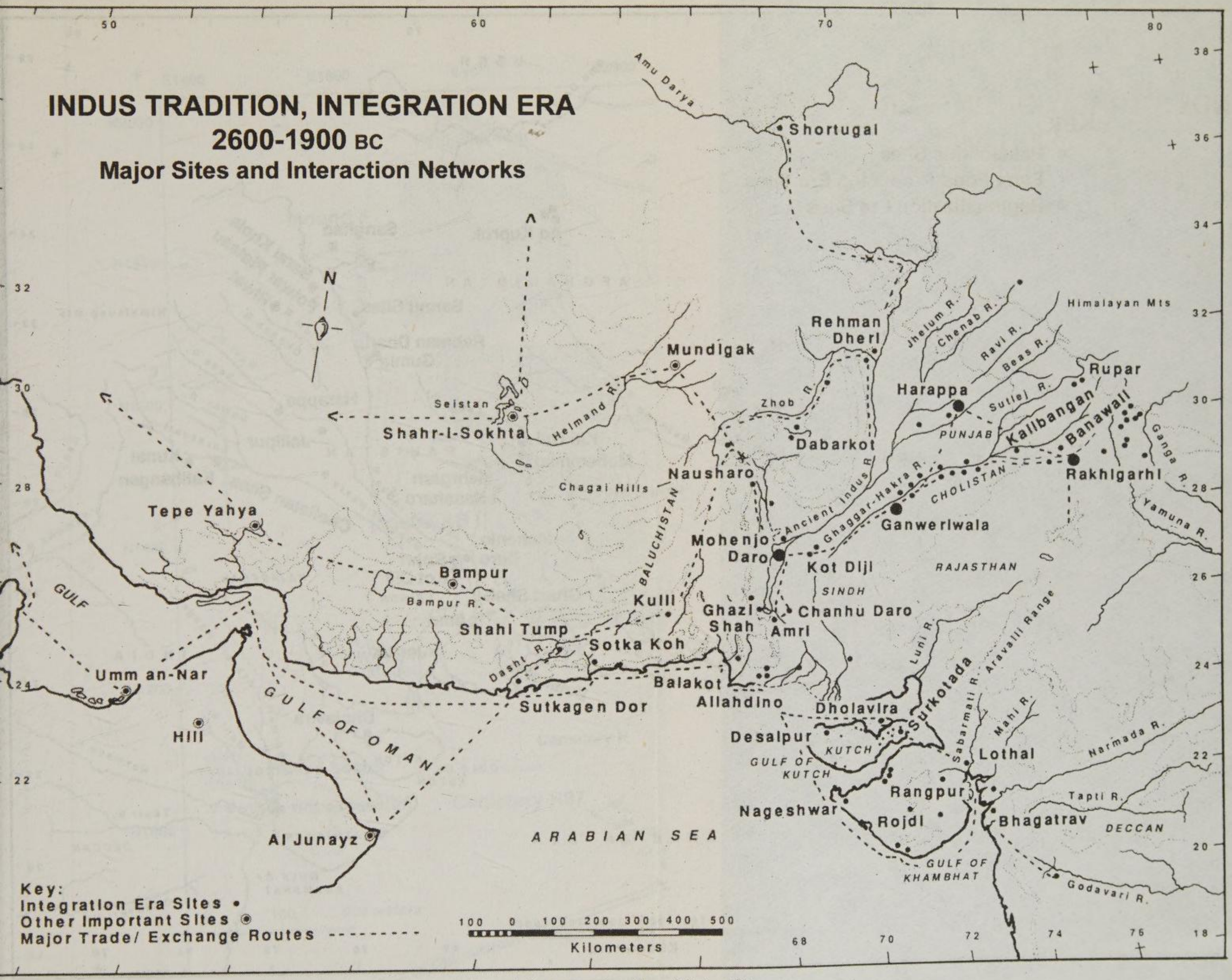


Fig. 1: Integration Era, Major Sites

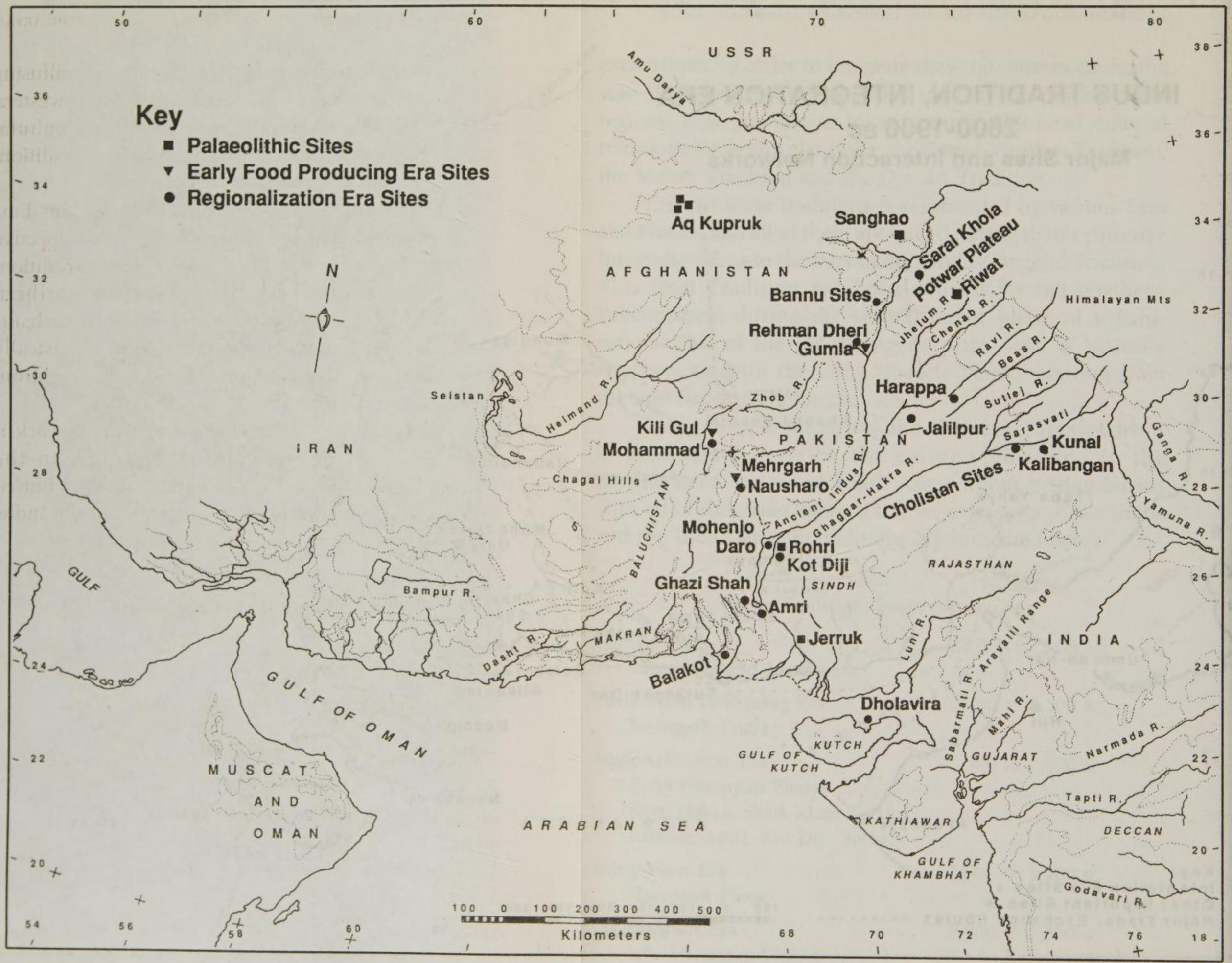


Fig. 2: Early Food Producing and Regionalization Era, Major Sites

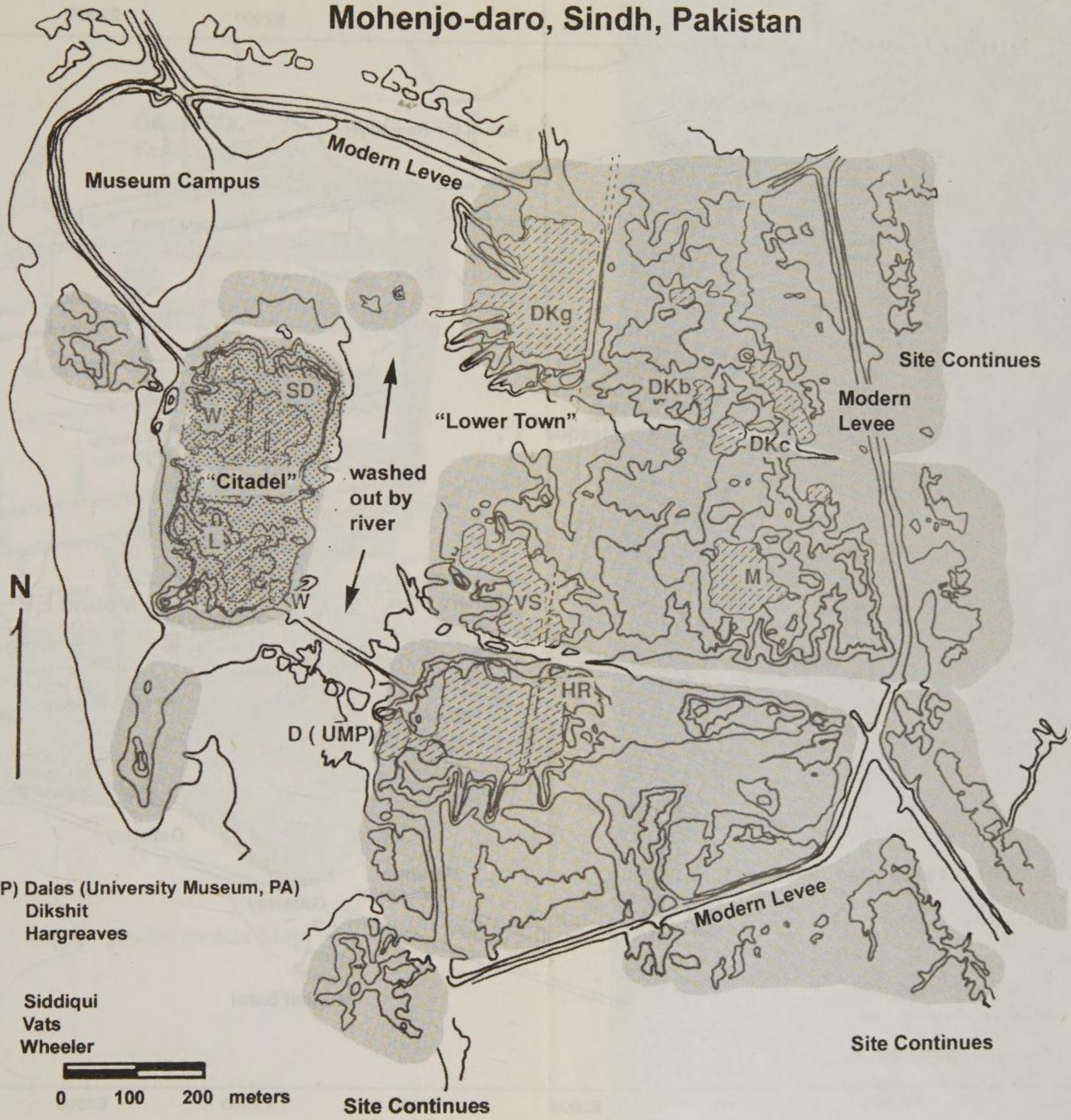


Fig. 3: Mohenjo-Daro Site Map

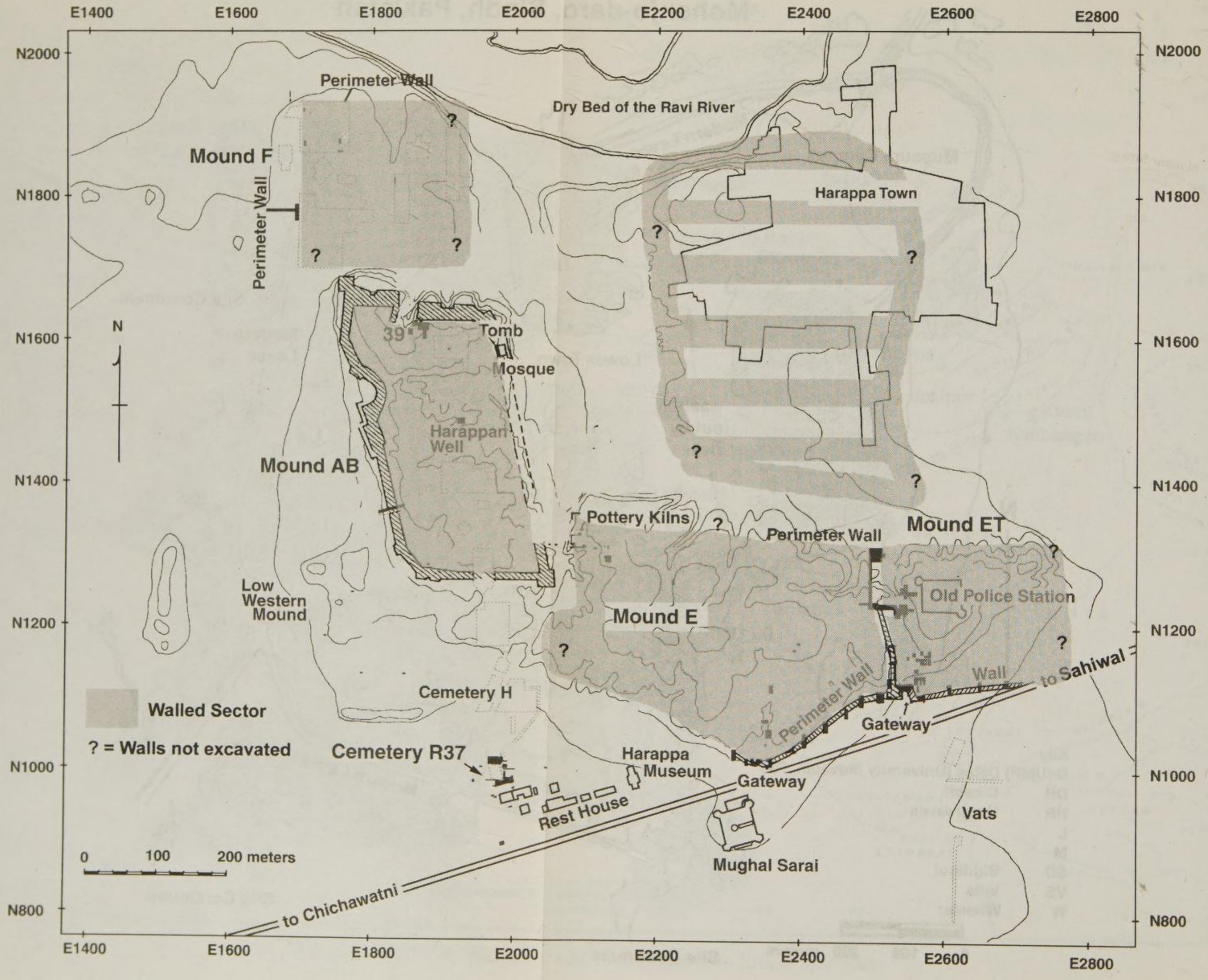


Fig. 4: Harappa Site Map

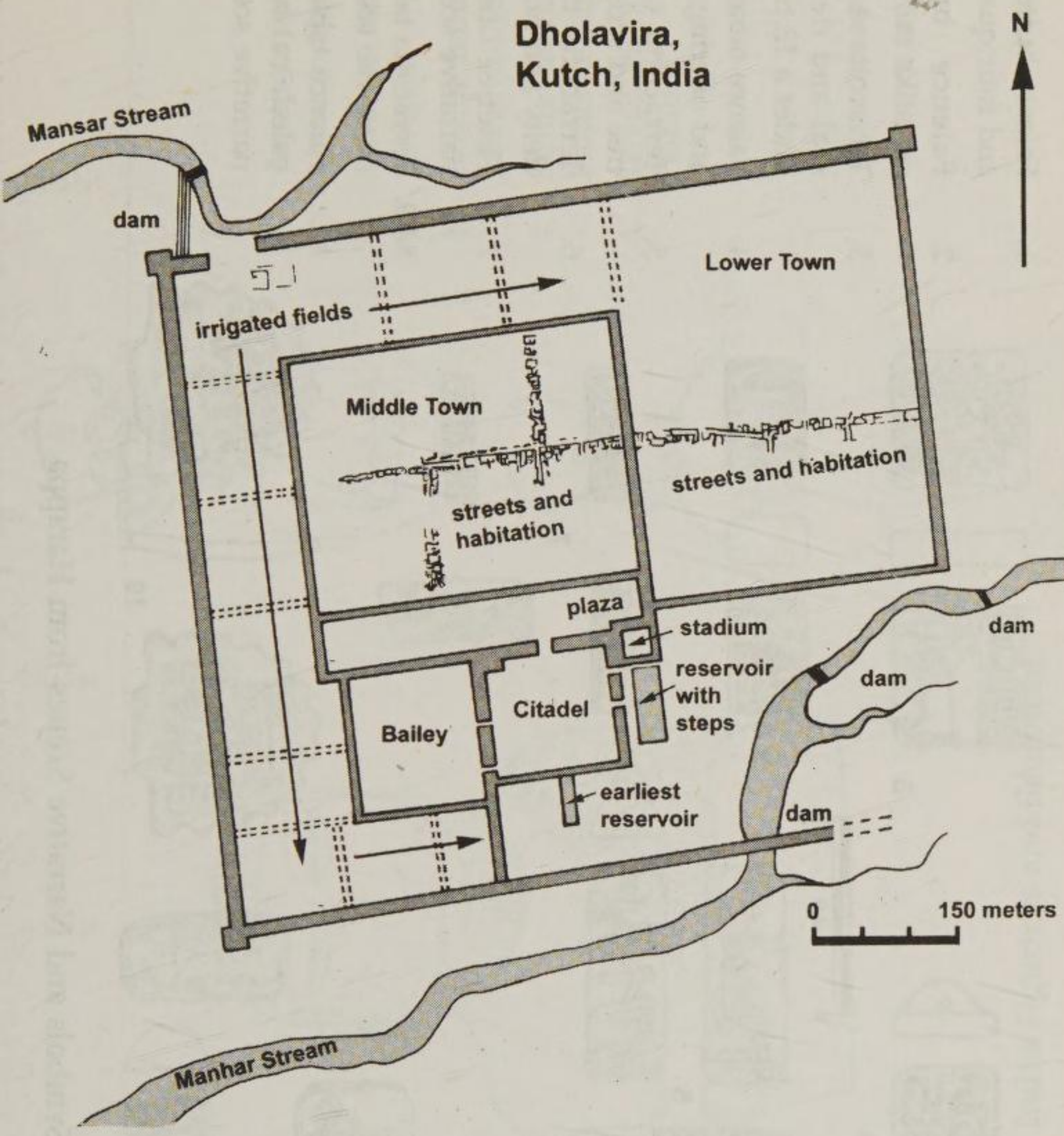
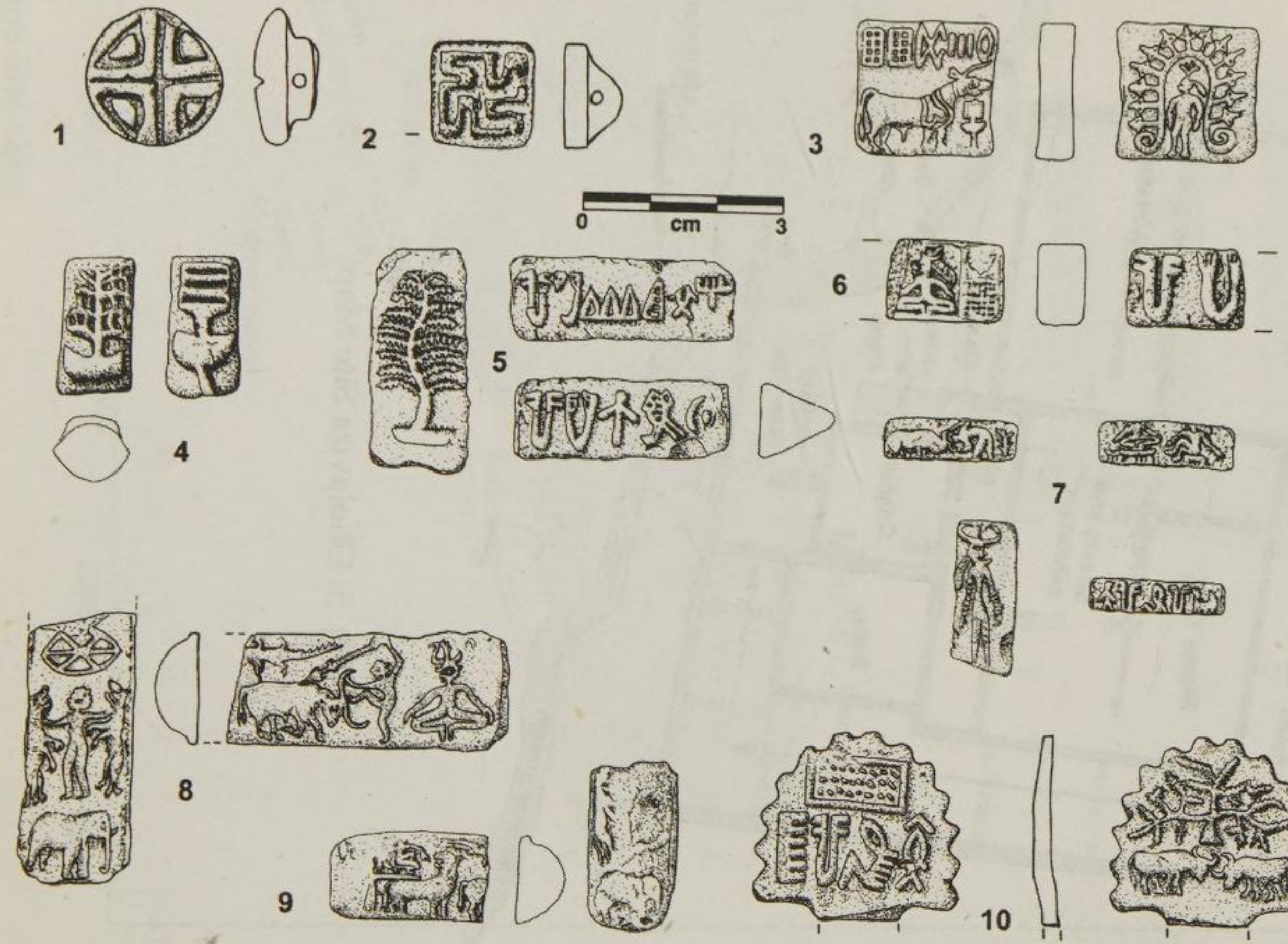


Fig. 5: Dholavira Site Map

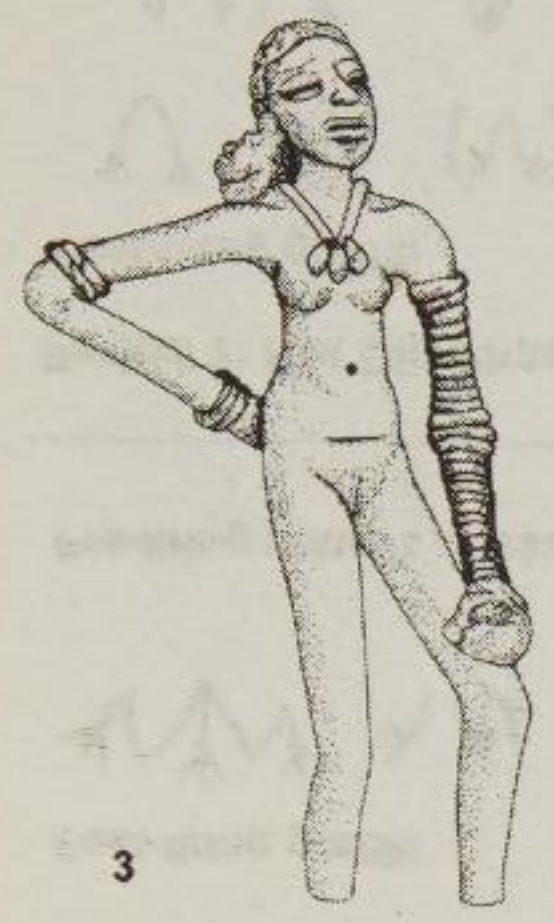


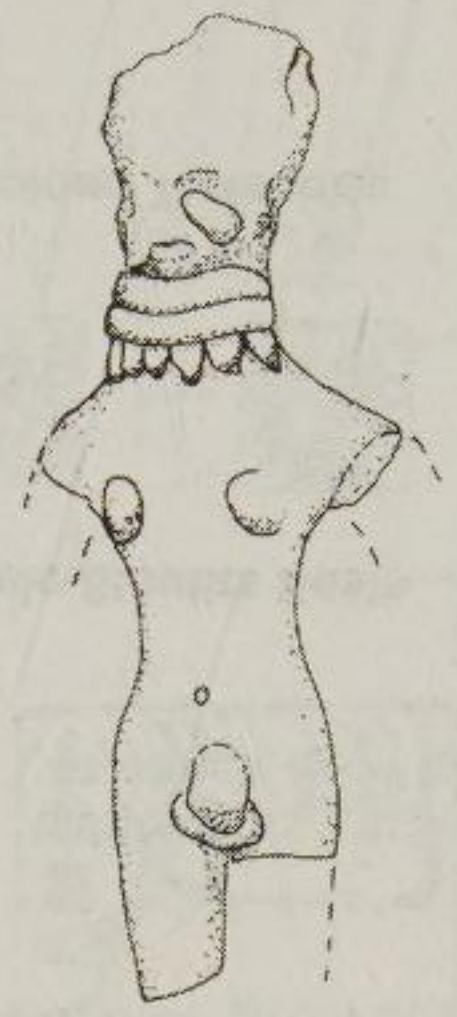
1. Faience button seal, circle and four quarters
2. Faience button seal, swastika motif
3. Terracotta sealing, unicorn seal and deity standing under a 13 pipal leaf arch
4. Faience tablet, sacred tree and offering stand
5. Terracotta tablet, sacred tree and script
6. Terracotta tablet, seated deity and house/temple
7. Faience tablets, four narrative scenes

8&9. Terracotta tables, multiple narrative scenes

10. Faience tablet, script and caledrical notation with narrative scene

Fig. 6: Indus Symbols and Narrative Scenes from Harappa





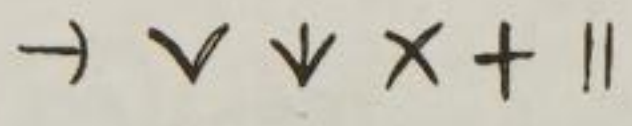
1. Terracotta female figurine, Mohenjo-Daro
2. Terracotta female figurine, Harappa
3. Bronze female figurine, Mohenjo-Daro
4. Stone male sculpture, Mohenjo-Daro
5. Terracotta male figurine, Harappa

Fig. 7: Indus Figurines and Sculpture

HARAPPA
Period 1: Ravi Phase

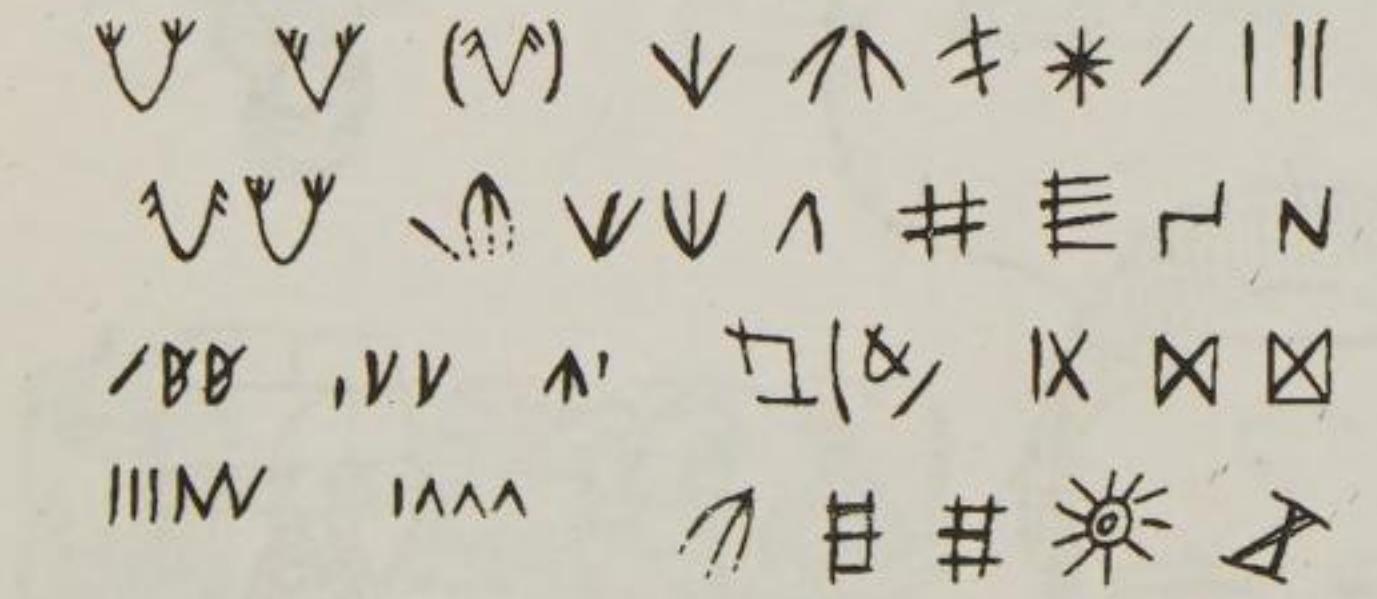
Post-firing graffiti

Pre-firing potter's marks



Period 2: Kot Diji Phase

Post-firing graffiti



Pre-firing potter's marks

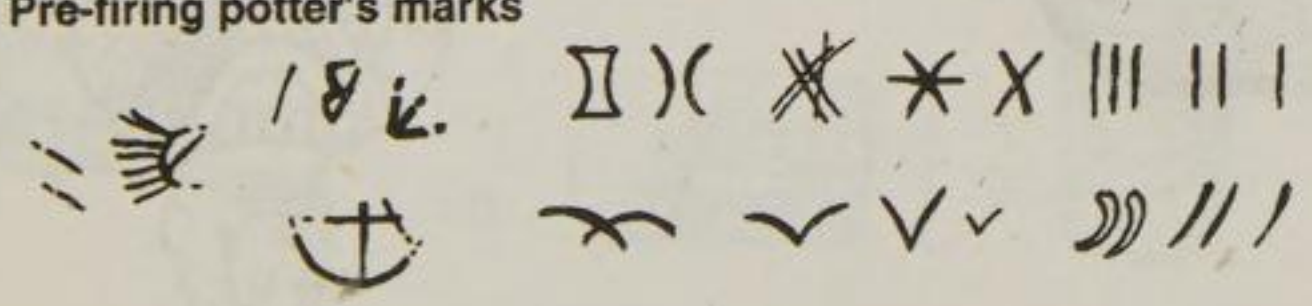
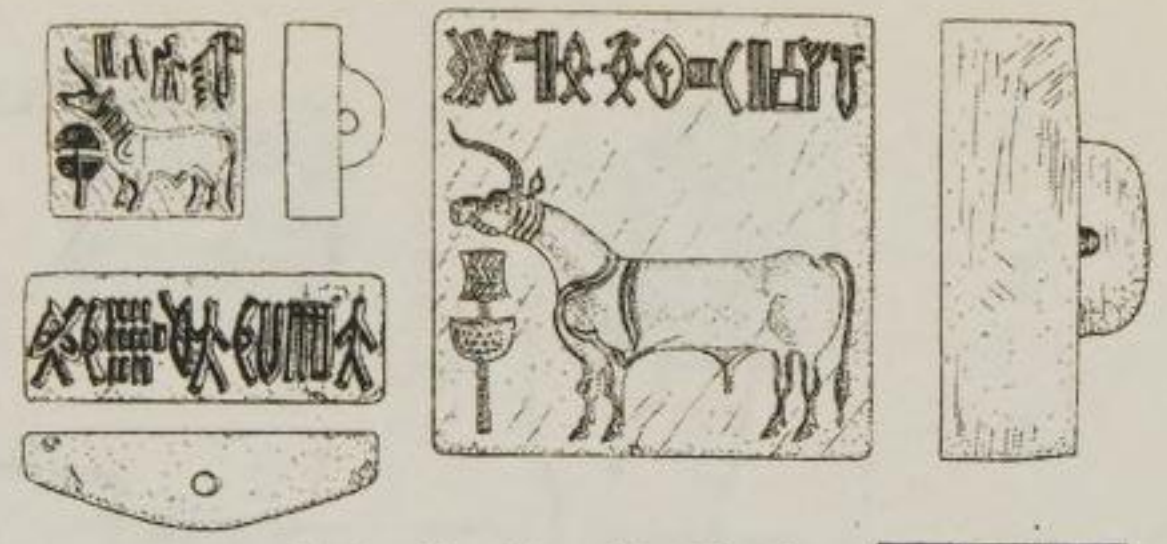


Fig. 8: Early Indus Script



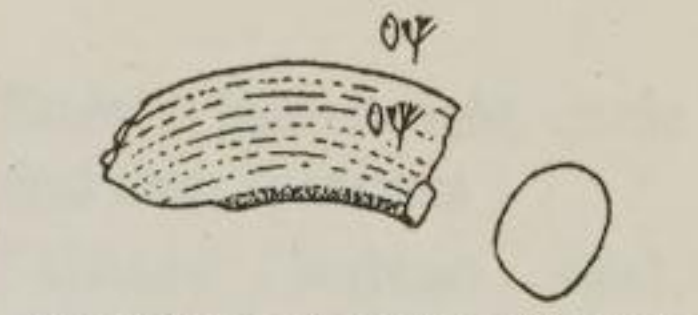


Fig. 9: Indus Script

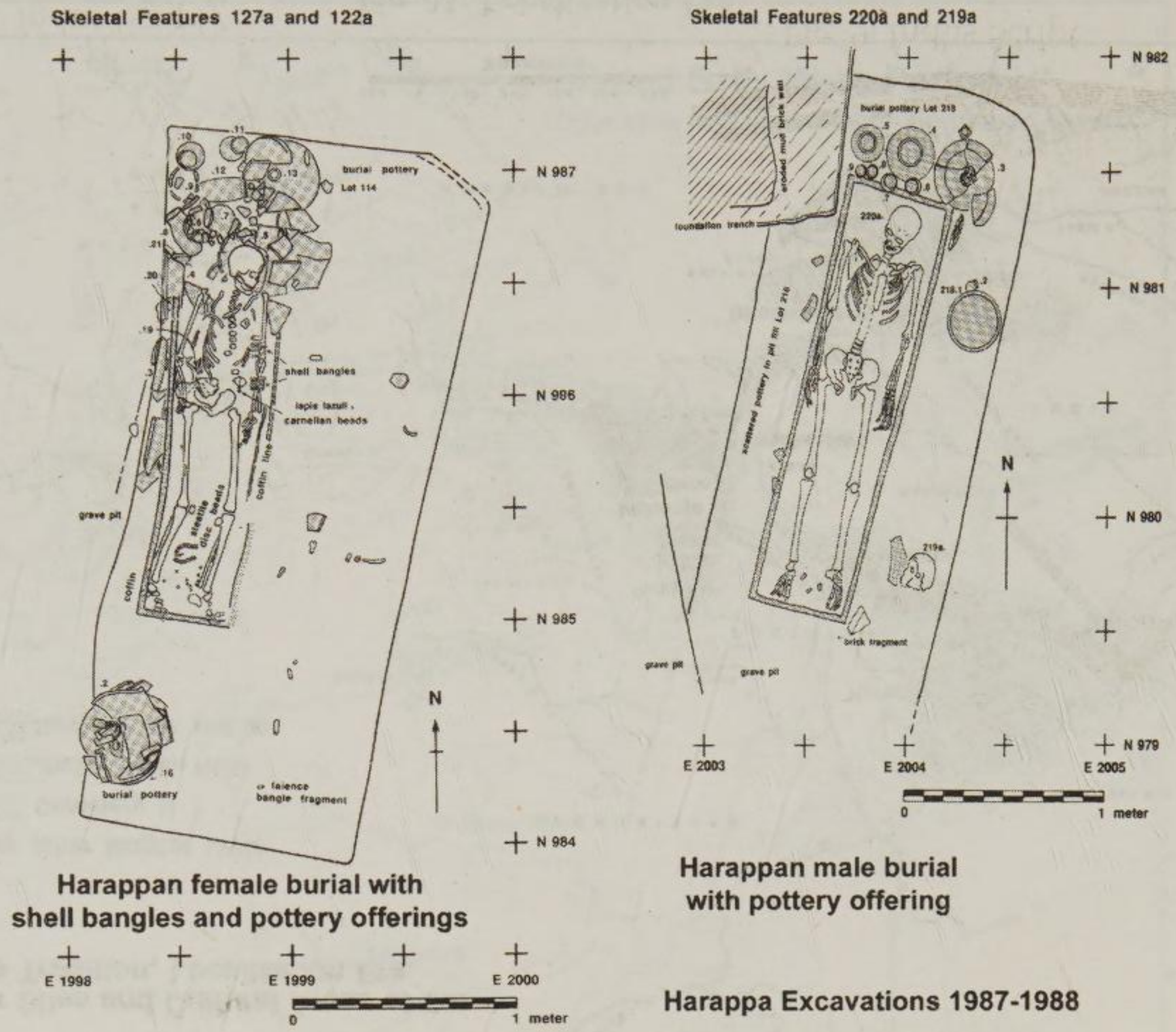


Fig. 10: Harappa Burials

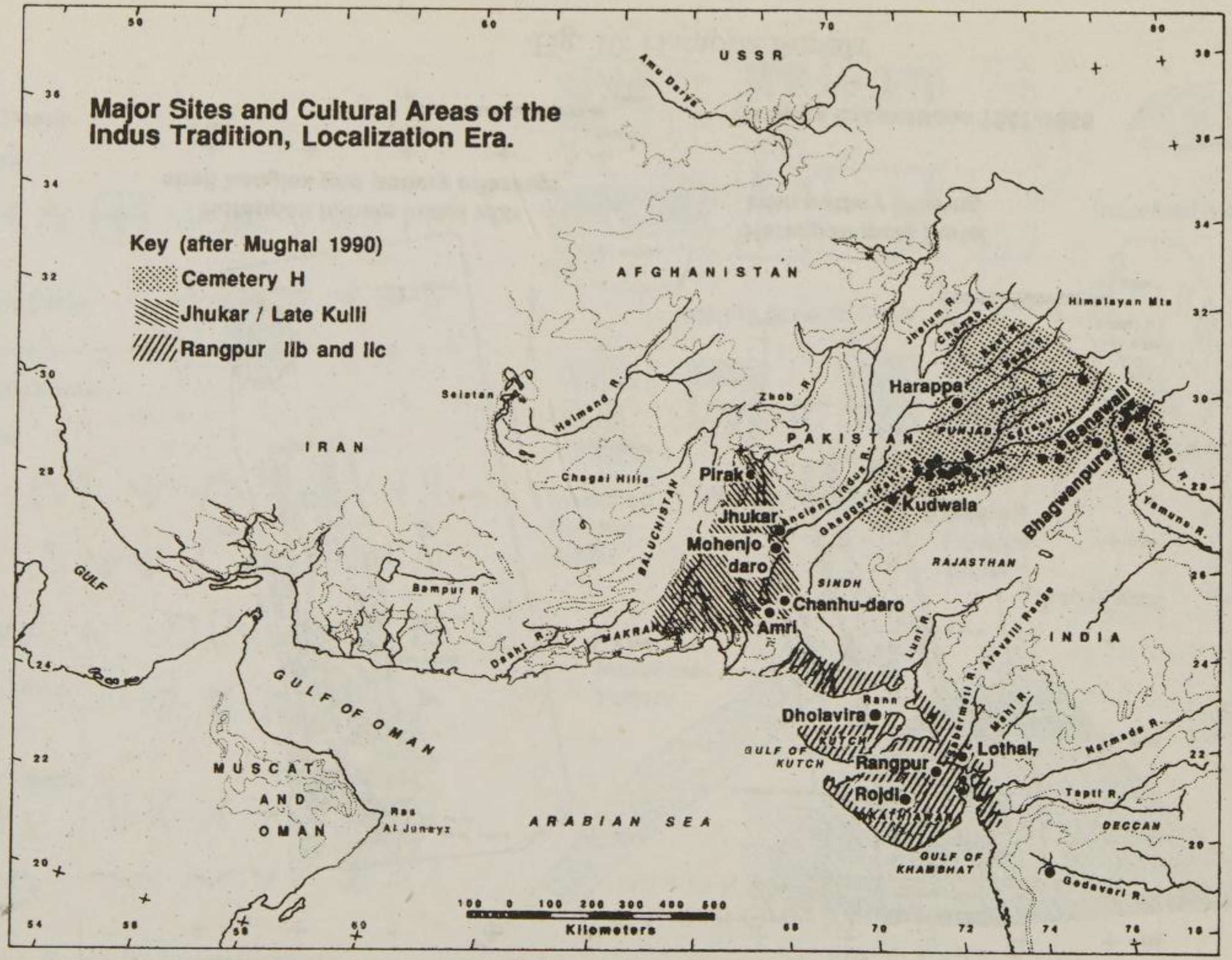


Fig. 11: Localization Era

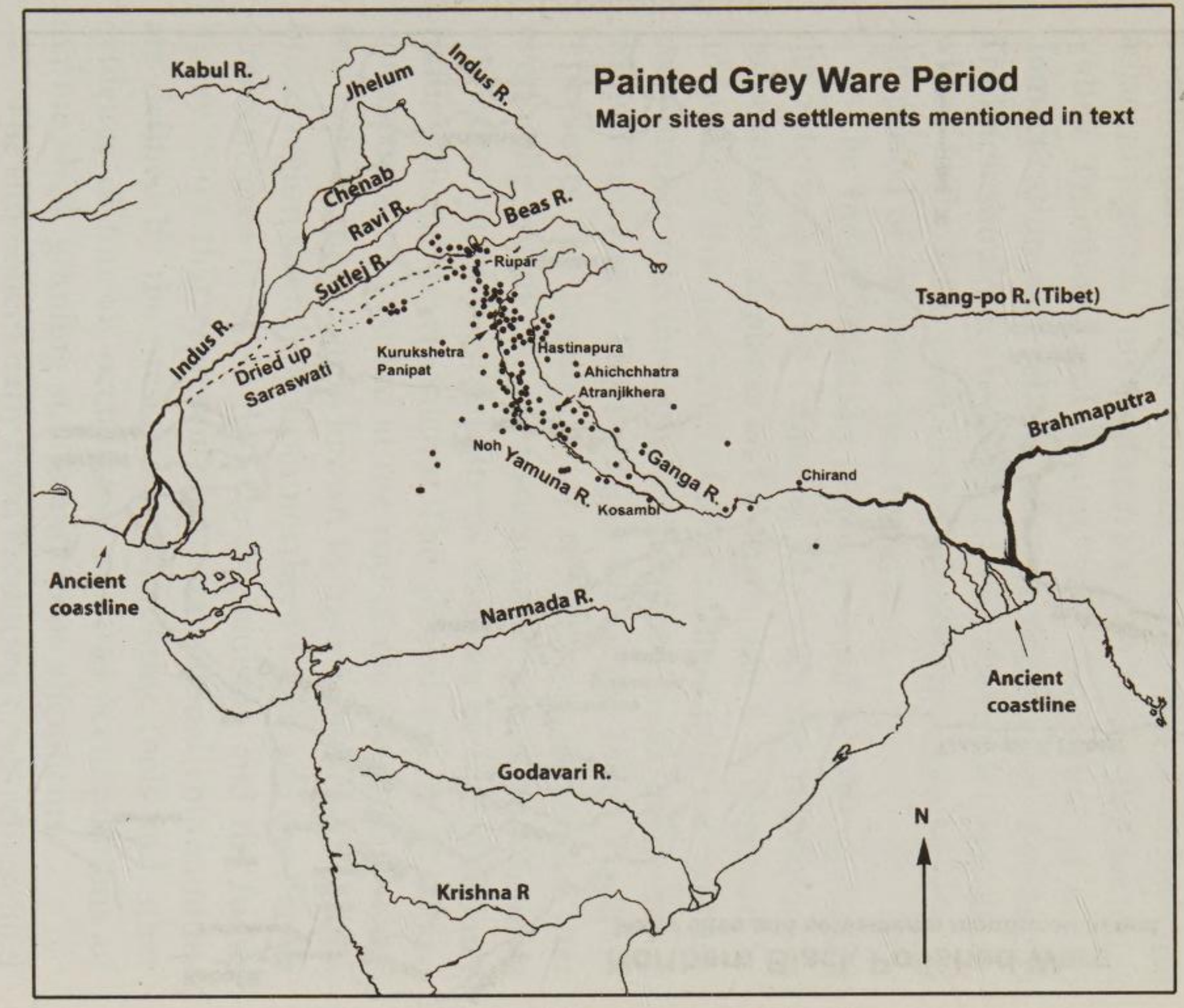


Fig. 12: Painted Grey Ware, Major Sites

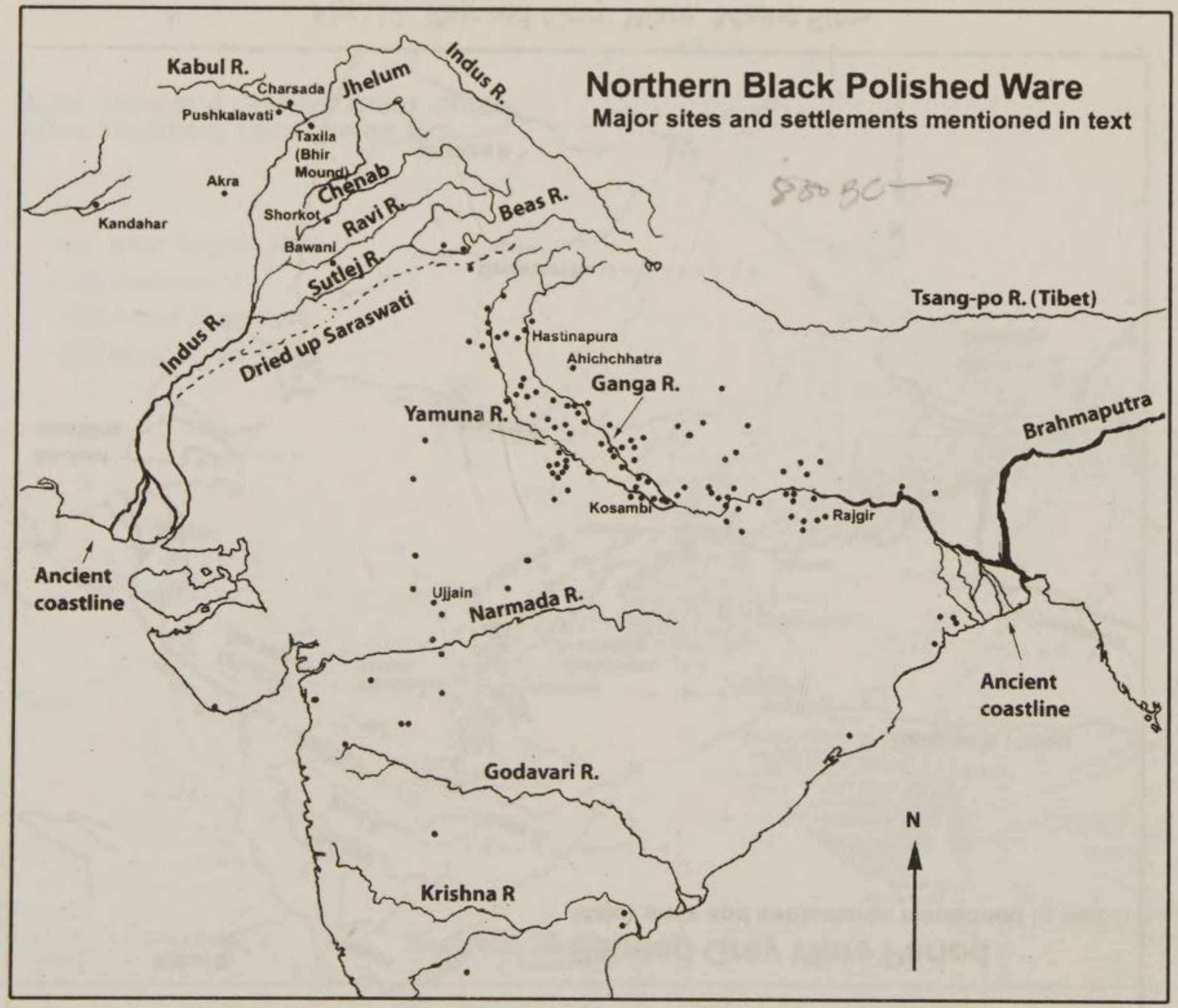


Fig. 13: Northern Black Polished Ware, Major Sites

Indus Tradition

The Indus Tradition refers to the total phenomenon of human adaptations that resulted in the integration of diverse communities throughout the greater Indus Valley and adjacent regions. This Tradition has also been called the Indus Valley Tradition, and begins with the period of initial domestication and settled village communities. The Indus Tradition should not be confused with the Indus Civilization, which is the term used in the general literature to refer to the period of urbanism and integration.

The Indus Tradition begins around 10,000 BC during the interface of the Foraging Era with the transition to domestication of plants and animals, but it is important to understand that the roots of this tradition may extend back even further into the early Palaeolithic period, more than 2 million years ago. The Foraging Era of the Indus Tradition represents the beginning of subsistence strategies that eventually led to the domestication of plants and animals and other technological patterns that can be linked to later Indus cultural developments. The general date of 10,000 BC corresponds to a period at the end of the Pleistocene when this type of transition is known to have been occurring in a broad region stretching from northern Egypt and the Fertile Crescent area of West Asia, to Afghanistan and the Indus Valley. Sites that represent these transitional communities are defined by the presence of microlithic tools and other evidence of human occupation, such as accumulations of marine shell, grinding stones and stone alignments.

The subsequent Early Food Producing Era is represented primarily at the site of Mehrgarh (7000–5500 BC) (Figure 2), where there is conclusive evidence for the use of domestic wheat and barley and domestic cattle, sheep and goats (Jarrige, Jarrige et al. 1995; Jarrige and Meadow 1980; Jarrige 1982). Early food producing communities that correspond

to other cultural traditions have been discovered in Kashmir and peninsular India. For the Indus Tradition, only one cultural phase (Mehrgarh Phase) has been identified for this Era, but future excavations in other regions may result in the identification of additional phases. At Mehrgarh, small rectangular mud-brick houses were subdivided into rooms and cubicles that could have been used for storage of grain and other necessities. Baskets coated with bitumen have been discovered in the houses and graves. No elaborate ceramic technology had been developed at this time, but the first basket impressed, low-fired ceramics begin to appear at the very end of this phase. Numerous ornaments made from marine shells and exotic colored stones were buried with the dead along with polished stone axes and chert blades. Additional sites that may belong to this Era have been discovered along the edges of the Indus valley, but have not yet been excavated.

The domestic animals and plants first used at Mehrgarh, especially humped cattle (*Bos indicus*), wheat and barley became the foundation for the subsistence economy of the later Indus cities. The roots of major technological traditions, such as shell working, stone bead making, chipped and ground stone and even mud brick architecture can be traced to this era.

From 5500 to 2600 BC numerous regional cultures emerged throughout the greater Indus region and represent the Regionalization Era (Kenoyer 1998). This relatively long time period has been subdivided into many distinct Phases on the basis of distinctive pottery, artifacts and chronological occurrence. Most sites reveal the presence of more than one phase. Specialized crafts including ceramics, metallurgy, lapidary arts, glazed faience and fired steatite were developed in each major region. Many crafts using organic materials such as textiles, basketry and woodworking have also been

documented. Distinct artifact and ornament styles represented by beads, bangles and decorated figurines evolved in specific regions. Geometric seals were made from terracotta, bone and ivory. The use of pre-firing potter's marks and post-firing graffiti on pottery set the foundations for the later emergence of writing. Extensive trade networks were established along the major river routes and across mountain passes to connect settlements to each other and facilitate the movement of goods and raw materials. Trade networks were maintained by emerging elites as well as by mobile traders. Communities specialized in pastoralism, fishing, foraging and hunting continued to exist alongside the more settled agricultural societies. The later part of the Regionalization Era, often referred to as the Early Harappan Period, represents a phase of formative urbanism. The building of walled settlements, the use of specific types of painted pottery and ornaments, the appearance of seals and rudimentary writing and the expanded trade networks represent the emergence of complex chiefdoms and incipient urbanism.

The Integration Era (commonly referred to as the Indus Civilization) has only one phase (Harappa Phase) that dates from approximately 2600 to 1900 BC (Kenoyer 1998). During the Harappa Phase, there is a synthesis of major regional polities into a larger integrated economic, political and ideological system. A relatively uniform range of pottery styles and other types of material culture including ritual symbols has been found at more than 2600 sites spread throughout the greater Indus valley (Figure 1).

Indus urbanism is defined on the basis of large central cities, which may have held between 40,000 to 80,000 people, surrounded by an irregular network of smaller towns, villages, hamlets and temporary camps of pastoral communities. Most cities, such as Mohenjo-Daro (Figure 3) and Harappa (Figure 4) were built with fired brick, while Dholavira

(Figure 5) was constructed extensively with shaped stone combined with mud brick. Smaller satellite settlements were generally built with mud brick. Most Indus settlements had north-south and east-west oriented streets with brick lined drains for disposal of wastewater.

A formalized writing system, the Indus Script, was inscribed on pottery, seals and a wide range of other types of objects (Figure 9). Although the script is not yet deciphered the context of its use indicates that it is connected to the establishment of powerful communities who dominated Indus society.

The use of standardized weights and measures indicates the presence of taxation and regulations of trade. Hierarchical social order and stratified society is reflected in architecture and settlement patterns, as well as artifact styles and the organization of technological production.

The main domestic animals were cattle, sheep and goat with some use of water buffalo. The domestic horse (*Equus caballus*), donkey (*Equus asinus*) or Bactrian two-humped camel (*Camelus bactrianus*) were used in isolated sites in Northern Afghanistan and Central Asia by around 3000 BC, but they were not found at the Harappan site of Shortughai in Afghanistan or other Indus sites. Furthermore these animals were not depicted in Indus art or figurines. All three animals are only found in the Indus valley after 1900 BC at the end of the Indus cities. The first confirmed use of horse and camel for riding is found in the latest levels of Pirak, a small site in the Kachi plain (Jarrige and Santoni 1979; Meadow and Patel 2003). Between 1800–800 BC elaborately decorated camel and horse figurines with riders were being produced at Pirak.

The Harappa Phase represents the first state-level political organization, but no single settlement dominated the region and there is no indication for the emergence of

hereditary monarchies or highly centralized territorial states (Kenoyer 1998). There is a conspicuous absence of central temples, palaces and elaborate elite burials that are characteristic of other early urban societies in Mesopotamia, Egypt and China. Although massive mud brick walls surrounded most large settlements, there is no evidence for burning or destruction of the cities as was the case during major conflict or warfare in other early civilizations. This does not mean that the peoples of the Indus cities were a "peaceful" society, but that conflict may have taken place on a relatively small scale and not in the major cities or towns.

Some scholars have tried to equate the Harappa Phase (or Indus civilization) with the Vedic period (Singh 1995), but as is clear from the summary presented above and more detailed discussion below, we do not have access to any linguistic data that would allow us to correlate the Vedic, Sanskrit speaking communities with the mute archaeological remains of the Indus. Furthermore, the types of artifacts and the nature of the settlements does not correlate to what is described in the *Ṛg Veda* or other later Vedic texts.

The Localization Era is a period of cultural transformation connected with changes in local environments, socio-political organization, changing population distributions and settlement patterns (Kenoyer 1998; Kenoyer 2005; Possehl 1997). Some urban centers decrease in size and other regions showing increasing numbers of smaller settlements. The Harappa Phase economic and political structures and associated artifacts such as inscribed seals and weights disappear. Beginning around 1900 BC, this transformation continues until around 1300 BC and overlaps with the Regionalization Era of the larger Indo-Gangetic Tradition. The major Phases identified for this Era represent the emergence and consolidation of localized states or chiefdoms with smaller scale social and political interaction. As the

cultural regions became disconnected, the unifying styles of artifacts of the earlier Indus cities disappeared. There is no evidence for warfare or the physical destruction of the Indus cities or even smaller villages during this period. Major changes occurred in burial practices, painted pottery styles and ritual objects (Kenoyer 2005). During this time period, literary sources indicate that Indo-Aryan languages and Vedic ideology and culture were spreading throughout the northern subcontinent. Vedic religious traditions set the foundation for later Brahmanical Hinduism. The roots of other religious traditions, such as Jainism and Buddhism, were also beginning to form at this time. In contrast to these changes, earlier Indus techniques of farming and herding continued to be used along with many of the technologies, such as ceramics, bead making, shell working and metallurgy. New technologies that emerge at this time include higher temperature kilns and glass bead making.

The Localization Era of the Indus tradition overlaps with the regionalization era of the Indo-Gangetic tradition discussed below.

Table 2

Indo-Gangetic Tradition

Regionalization Era	
Vedic and non-Vedic Chiefdoms	1500-800 BC
Painted Grey Ware	ca. 1200 to 800 BC
Northern Black Polished Ware	700 or 500 to 300 BC
Early Historic City-States and Republics (16 Mahajanapadas)	600-300 BC
Saisunaga Dynasty	542-563 BC
Nanda Dynasty	362-321 BC
Achaemenid Persian occupation in NW	559-326 BC
Imperial Integration	
Mauryan Empire	321-185 BC

Indo-Gangetic Tradition

The Indo-Gangetic Tradition refers to the major human adaptations that eventually encompass the larger geographic region extending over the Ganga-Yamuna river valley as well as the greater Indus river valley and much of Peninsular India (Kenoyer 1995; Kenoyer 1997). Although this Tradition has significant links to the earlier Indus Tradition, it represents a dramatically different trajectory and builds on the regional cultures that were established in Western India, the Gangetic and Deccan regions. The Indo-Gangetic Tradition is directly correlated with the emergence of Early Historic states and urban centers during the period from 600 to 300 BC. Initially centered in the Ganga-Yamuna river valley and parts of the northern Indus Valley, this tradition spreads out gradually and over many centuries to the entire sub-continent and includes Afghanistan and Central Asia. It also eventually incorporates areas of Nepal, the Brahmaputra river valley (modern Assam and Bangladesh) and the eastern regions of northern Assam including parts of modern Burma.

In the vast geographical regions encompassed by the Indo-Gangetic Tradition, numerous isolated communities of foragers continued to exist alongside the settled farming communities and later urban societies that characterized the Regionalization and later Integration Era. These communities are mentioned in literary documents and depicted in narrative art, but no archaeological studies have been conducted to identify and articulate their role during later Eras.

The decentralized polities of the Localization Era of the Indus Tradition and the regional cultures of the Regionalization Eras of the Gangetic, Western Peninsular and Deccan traditions combine to form the basis for this era. From approximately 2000 BC to 300 BC new settlements spread throughout the northern Punjab, the Ganga-Yamuna river valley and the Malwa Plateau. This was a period of

synthesis and new inventions. Rice and millet agriculture became widespread in regions watered by the monsoon rains, the use of iron tools, the horse and camel became common place. As was the case during the Regionalization Era of the Indus Valley tradition, this period set the foundation for the subsequent developments in the Integration Era. Geographical and cultural areas that were once core and periphery from the perspective of the Indus Valley Tradition become reversed with the establishment of new political centers in the Ganga-Yamuna region and the northern portion of the Indus plain between Taxila and Peshawar.

Although the Indo-Gangetic tradition is not the focus of this essay, it is important to point out that the decline and transformation of the Indus tradition is closely linked to the foundational era of the subsequent cultural tradition.

Protohistoric Chiefdoms and States

Indus Tradition: Harappan Phase

The earliest large-scale urban society in South Asia emerges during the Harappan Phase of the Indus Tradition, 2600-1900 BC. This society has been defined as a complex chiefdom by some scholars (Shaffer 1992), and a state level society by others (Kenoyer 1994). Although these terms have significance for living societies, it is unlikely that these differences can be easily identified archaeologically and many scholars prefer to focus on the questions of hierarchy and heterarchy. Hierarchy refers to the ranking of elements in society using specific criteria, such as size, complexity, power. Heterarchy refers to the relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways (Crumley 1995). Generally speaking complex chiefdoms have one large settlement and only one or two levels of smaller satellite towns or villages. State level society, tends to be more

stratified, with four or more tiers of settlements with multiple large settlements competing for political and economic power. Stratification is state-level society is also seen in political organization, in economics and in social organization.

Due to the large geographic area and the many different sizes of settlements associated with the Indus civilization, it is more appropriate to consider the larger settlements as representative of state level society, with some of the smaller regional centers in remote areas possibly representing chiefdoms. The largest cities, such as Harappa, Mohenjo-Daro, Rakhigarhi and Ganweriwala may have been relatively independent city-states with direct political control only over local settlements and lands. Several competing classes of elites would have been present in these urban centers; merchants, ritual specialists and individuals who controlled resources such as land, livestock and raw materials. The elites and their supporting communities probably maintained different levels of control over their respective regions. During the 700 years of the Harappan Phase (Indus Civilization), the structure of political control in major cities appears to be relatively decentralized. There is also no indication of territorial states that competed with each other through military conflict.

Separate walled mounds with associated suburbs at both Mohenjo-Daro (Figure 3) and Harappa (Figure 4) suggest that these two cities had similar hierarchies of competing political and socio-economic classes. While it is not impossible that a single community of elites with strong kin ties controlled both cities, it is highly unlikely that a ruler in one city dominated all of the other cities. In fact, regional differences in artifact types and city layout suggest that each of the Harappan cities had an independent community of ruling elites. No single building or group of buildings

dominated either site. The political organization was probably not a hereditary monarchy, where one would expect to see palaces, royal storehouses and royal tombs. On the contrary, the presence of numerous large buildings and public spaces in the Lower Town at Mohenjo-Daro and Mound F at Harappa support the interpretation that there were several distinct elite groups living in the cities. One clear exception to this pattern is seen at the site of Dholavira, in Kutch (Figure 5). A set of three nested walled areas with a dominant citadel that had four major gateways suggests that the political organization of this settlement may reflect the dominance of a single class. It is possible that this city was a small kingdom, but it also could represent a colony of one of the core area cites ruled by a governor.

Indus Social and Political organization

The presence of hierarchical classes in the Harappan Phase cities is supported by the layout and organization of the cities. Many other categories of evidence, such as 'ritual' objects, ornaments, seals and weights provide additional evidence for social stratification. Although there appears to have been occupational specialization in the Indus cities, the lack of separate burial areas or highly differentiated habitation areas and material culture suggest that rigidly defined social strata, such as the later *varna* system, or hereditary castes (*jati*) were not the norm.

Earlier generalizations about uniformity in artifacts have stressed the authoritarian nature of Harappan culture, but most of the uniformity can be explained through the presence of a common belief system or conservative ideology that required specific symbols and artifacts for ritual purposes as well as for defining class affiliations. These symbolic objects also would reinforce the hierarchy of the society and help to legitimize the socio-economic and political order. The role

of kin related learning processes and the diffusion of craft specialists from specific communities to all of the major settlements is also an important mechanism for maintaining uniformity in technologies as well as style.

Based on comparisons with Early Historic polities, Harappan cities were probably comprised of competing elites whose centers of power would have been within each of the separate walled mounds at Mohenjo-Daro and Harappa, or in the acropolis at Dholavira. These walled mounds would have served to reinforce the distinct communities of ruling elites and allow total economic control of specialized goods being produced by artisans in a specific sector.

Fluctuations in dominance between the communities on each of the mounds probably contributed to the economic development and the rapid build up of the city as a whole. New suburbs with associated craft areas may have resulted from growing populations within the city and the agglomeration of new populations to the city. Similar patterns of competition between elites within a city-state are well documented in the Early Historic states. The widespread distribution of Harappan Phase settlements may reflect a process of expansion and colonization through competition and fission among the ruling elites from the core regions of the Indus and Ghaggar-Hakra valleys. A site like Dholavira, or any of the smaller walled settlements in Gujarat, the Punjab, Baluchistan or Afghanistan could represent such outposts or colonies. In contrast to the core area cities these outpost settlements may have supported only one dominant elite community along with the necessary support classes comprised of laborers or indigenous peoples.

Indus Religion and Expressive Culture

Religious practices and beliefs are represented in symbols and narrative scene depicted on seals, pottery and other

objects. The most important narrative scenes show sacrifice and worship (Figure 6). The worship of trees and deities in trees suggests that most rituals were carried out in the open or at the foot of a sacred tree such as the banyan, pipal or acacia. Some large buildings may have been used as temples, but their precise function cannot be confirmed. Terracotta figurines of possible horned male deities and elaborately decorated females may represent deities or worshippers (Figure 7). Stone sculptures of male figures who are sitting on one bent leg, with the other leg bent in front have been widely referred to as representing deities or priest-kings but the specific kneeling posture suggests a supplicant rather than a deity. Abstract symbols such as the swastika and endless knot motifs, and other enigmatic symbolic objects are also thought to reflect ideology, but their precise meaning cannot be known without the aid of readable texts. Harappan religion or socio-ritual belief systems reflect a multiplicity of levels ranging from local cults to what could be called an established "state" religion practiced by the elites of the different cities and emulated by the lower classes.

Examples of local cults may be seen in regional styles of female figurines or ritual symbols on pottery. The practice of a more unified "state" religion may be reflected in the widespread use of the mythical "unicorn" as a motif on seals and other objects. The distinctive offering stands found on unicorn seals also suggests a uniform ritual. Many narrative seals depict ceremonies or rituals that may have been part of state sponsored religious festivals.

Indus Writing

The origins of the Indus writing system can be traced to the Early Indus period, circa 3300-2800 BC, at sites such as Harappa (Kenoyer and Meadow 2000) (Figure 8), Rehmandheri (Durrani, Ali and Erdosy 1995) and Mehrgarh-

Nausharo (Quivron 1997). Once it became fully established the Indus writing system spread to all parts of the Indus valley. The Indus script has not yet been deciphered but some of the pictographic signs can be understood contextually. Most inscriptions are extremely short, consisting on the average of about five discrete symbols and the longest inscription is 26 characters. Indus writing was predominantly executed from right to left, though rare longer inscriptions were written in boustrophedon, alternating from right to left on each succeeding line (Parpola 1994).

The language represented by the writing cannot be determined until the script is deciphered. However, the analysis of non-Indo-Aryan linguistic elements in Old Indo Aryan languages (Southworth 2005:64-67) and studies of place names (toponymy) that may indicate the presence of early linguistic communities, it appears that more than one language may have been spoken in the greater Indus Valley (Fairservis and Southworth 1989). For example, rivers in Sindh and Baluchistan have names that can be attributed to Mundari or Dravidian languages even though there are no modern speakers of these languages in the region today. In the Punjab and Afghanistan, the rivers have Indo-Aryan names, while further to the north the names become Tibeto-Burman or some other language. Future studies of place names need to be undertaken to better understand the implications of these patterns.

If different languages were spoken throughout the regions encompassed by the Indus cities, it is not unlikely that the Indus script may have been used to communicate in more than one language. Many language families may have been present in the Indus region, including Dravidian, Austro-Asiatic, Tibeto-Burman and Indo-Aryan (Southworth 2005). While some individuals have proposed that the Indus script was not a writing system and was not used to encode

a language (Farmer, Sproat and Witzel 2004), this opinion is highly debatable.

The Indus script appears to have been used primarily by elites and occurs on inscribed steatite seals and various types of tokens or tablets, or as graffiti on pottery (Figure 9). The general function of the inscriptions would have been to identify ownership of goods or economic transactions, accounting, the recording of socio-political or ritual events and less formal graffiti.

The most common form of writing is seen in graffiti on pottery. Unfortunately, the fragmentary nature of pottery results in relatively few complete inscriptions being available for study. The most complete inscriptions are found on intaglio seals or various types of inscribed or molded tablets. The seals usually have a relatively short inscription at the top of the seal, below which are various iconographic motifs. A single animal or mythical composite figure faces either to the right or left and an object that has variously been described as an offering stand or a brazier is placed in front of the animal. During the latest occupations of the Harappan phase, seals with complex iconographic scenes were carved, depicting mythological or socio-ritual events. Seals were probably worn around the neck or at the waist and hung from a pierced boss on the back of the seal. Impressions of the seals have been found on pottery, lumps of wet clay or bullae for sealing containers or rope-tied bales. In some instances two or more seals were used, often stamped one above the other with only the writing being visible. This practice indicates that the writing was being read and understood by merchants who would have been trading the goods. Writing is also found on gold ornaments, bangles, bone and ivory objects, bronze tools, trade vessels and storage containers. Sometimes signs were scratched into the wet clay lumps by hand.

Indus Burial Traditions

Burials with grave goods probably indicate a belief in an after life. Scattered burials as well as discrete cemeteries have been found in each of the major Indus regions at sites such as Lothal, Rupar, Harappa, and Kalibangan. The small size of the cemeteries indicate that only certain groups practiced burial while others were disposed of by other means. The people buried at Harappa were relatively healthy and well fed. The major health problems are periodontal disease, abscesses, caries and tooth loss. The presence of arthritic joints (e.g. vertebral osteophytosis) is seen on some older individuals, and porotic hyperostosis of the crania in rare examples could result from anemia due to malaria. There is some minor variation in the mode of burial and the quantity of grave goods but no indication that different classes of people were buried in the same cemetery.

Burials at Harappa consist of a north-south oriented rectangular pit with burial pottery placed in the bottom (Figure 10). The corpse, with head to the north, was laid out on top of the pottery, either in a wooden coffin or wrapped in a shroud. Burial pottery may have contained food offerings. Other burial goods include personal ornaments such as a copper ring, occasional beads of agate, carnelian or jasper, steatite bead necklaces and ankle bracelets, shell bangles on the left arm of females, and copper mirrors with females. No inscribed objects or high value items such as seals, gold ornaments, long carnelian beads and large copper tools were included in the burials.

Decline and Transformation of the Indus civilization

The state level organization of the Indus cities appears to have been reduced in terms of scale during the Late Harappan period (1900-1300 BC) (Figure 11), but the continued

presence of large cities and settlement hierarchies indicates that small city states or chiefdoms continued to dominate the landscape of the Punjab and parts of Sindh (Kenoyer 2005).

The factors leading to the decline of the Indus cities are highly varied depending on the region. For example, there is evidence for flooding at sites such as Chanhudaro in Sindh and Lothal in Gujarat, but not at Harappa in the Punjab. The drying up of the Ghaggar-Hakra would have been devastating for the people of Cholistan and the Thar, but the Indus and its tributaries did not dry up and people continued to live along their banks. Over grazing of the land, or continuous agriculture without the use of fallow cycles could have exhausted the fertility of the land. The widely extended trade and political networks would have been seriously impacted by minor changes in economic productivity, as well as by the overcrowding in cities due to the drying up of the Ghaggar-Hakra River. There is no evidence for violent conflict in the Indus cities during the late phase of occupation, though there may have been increased banditry along trade routes and outside of the cities.

During the period of gradual decline and reorganization new agricultural settlements of Late Harappan communities were established in Gujarat and the eastern Punjab as well as in parts of the Ganga-Yamuna Doab. At the same time, other regional cultures began to emerge throughout the greater Indus valley and surrounding regions, parallel to the Late Harappans and eventually absorbing or replacing them.

Late Harappan: Cemetery H Phase

In parts of the northern Indus Valley, Punjab and Ganga-Yamuna Doab, the Late Harappan period is dominated by the Cemetery H culture. Although no large horizontal

excavations have been made, settlement patterns suggest the continuation of three or four tiers of settlement hierarchy and a continuity of urban centers. Distinctive painted pottery with black designs painted on red slip indicate a widely shared symbolic painting style and technological tradition. One of the most important changes seen during the Late Harappan period is the breakdown of long distance trade between the Indus valley and the northwest, as well as the southern coastal regions. This interpretation is based on the absence of marine shell ornaments and the disappearance of distinctive stone drills for perforating hard stone beads. There also appears to be a decline in access to specific stone resources such as lapis lazuli from northern Afghanistan and carnelian from Kutch or Gujarat. The breakdown in long distance trade may have stimulated innovations in faience and glass making, as well as new bead drilling techniques for hard stone. Faience was used to create deep blue beads that look like lapis, and glass was used to make shiny red-orange beads that look like carnelian. Faience was also used to make white beads and pendants that look very much like shell. These technological innovations appear to reflect a creative environment stimulated by demand for high status items by elites who were part of a diverse urban population.

The changes in painted pottery styles and the inclusions of these pottery vessels in distinctive pot burials, suggests that the Late Harappan elites had significantly different beliefs from the previous Harappans. However the change in pottery styles and burial practices was quite a gradual change, and the importance of specific colors of beads, regardless of the actual material being used to manufacture them, suggests a continuity in many aspects of ideology. These patterns could indicate that Late Harappan elites emerged from indigenous communities at Harappa or through the synthesis of local and non-local elements.

Jhukar Phase

Jhukar Phase refers to the Late Harappan southern cultural tradition found in the final Harappan levels at the sites of Jhukar (Mughal 1992), Mohenjo-Daro, Chanhu Daro and Amri. Jhukar culture is identified on the basis of distinctive pottery with black painted designs on red and cream slip, and distinctive geometric stamp seals. Some of the material culture shows continuities with the preceding Harappan phase, but chert weights and Indus writing is no longer present. Jhukar circular seals are also found at the site of Pirak (Jarrige and Santoni 1979). Most recently, sealings of similar circular seals with geometric designs have been found at the site of Gilund (Rajasthan). The distribution of Jhukar style artifacts throughout the southern Indus valley indicates extensive regional exchange, possibly as far as the site of Gilund to the east. However, the lack of Jhukar pottery at Harappa, or other sites in the north, seems to demonstrate the lack of major long-distance trade. Many of the Jhukar sites in Sindh were eventually abandoned around 1700 BC and not re-inhabited until the Early Historic period around 500 BC or later.

Pirak Phase

Another Late or Post Harappan culture from Baluchistan is seen at the site of Pirak on the Kachi Plain, which can be dated from 1700-700 BC (Jarrige and Santoni 1979) or 2000-1300 BC (Shaffer 1992). Many of the architectural styles and even pottery styles appear to reflect indigenous cultures that had been in the region since before the Harappan period. Square and circular stamp seals with geometric designs are similar to earlier forms from Mehrgarh and Nausharo, and have parallels with Jhukar seals from the Late Harappan period. The introduction of rice and the presence of horse and two humped Bactrian camel figurines along with riders

at Pirak indicate new forms of subsistence and transportation. The rice cultivation can be linked to either the Indus and Gujarat regions, or to Swat in the north. Very little can be said about the social or political system, but isolated burials sometimes associated with horse burials may indicate the presence of semi-nomadic tribes or chiefdoms. The use of horse and camel can be linked to Afghanistan and Central Asia. The association of horse with Vedic culture has led some scholars to see Pirak as evidence for intrusive communities entering the Indus valley from the northwest. However, it is important to note that the pottery and figurine styles of Pirak are restricted to the Kachi Plain and Baluchistan, and do not spread to other sites in the Indus Valley. This suggests that the cultural tradition of horse using people represented at Pirak did not spread to the Punjab or to the Ganga-Yamuna doab and therefore cannot be linked to the Vedic society. However the use of the horse may have spread without any accompanying pottery either from Baluchistan or from a more northerly route associated with the Gandhara Grave Culture discussed below.

Gandhara Grave Culture

In the northern Indus Valley, particularly the isolated valleys of Swat, Dir and Chitral, the Gandhara Grave culture (1700-200 BC) is represented by small settlements and associated cemeteries (Stacul 1984). The society appears to have been organized as a hierarchical chiefdom with some individuals being buried with large quantities of burials goods, while others had only a few pots. Most of the pottery with these burials is burnished grey wares that are very different from pottery made in the Indus or Gangetic region. Horse burials associated with inhumations at the site of Katelai in Swat may represent high status individuals and special rituals associated with their death (Stacul 2001). On the basis of

the horse burials and certain artifact styles, some scholars have associated the Gandhara Grave culture with Indo-Aryan or Vedic culture, but without written texts it is impossible to confirm this linguistic affiliation. Recent discoveries of cist burials in the Salt Range (Shahbaz Khan 2003–Personal Communication) may indicate that the Gandhara Grave culture extended as far as the northwestern Punjab, but it does not appear to have spread further to the south or east into the Eastern Punjab or the upper Ganga-Yamuna region, which is the core area for the later Vedic and *Mahābhārata* traditions.

Lustrous Red Ware Phase

In Gujarat, the Late Harappan period is characterized by relatively dispersed small settlements with no large regional centers (Possehl 1997). In Kutch the number of Late Harappan sites declines dramatically in contrast to the numerous small sites and regional centers of the Harappan Phase (Bhan 1992). In Saurashtra and mainland Gujarat Lustrous Red Ware sites are dispersed along major water-courses or wherever water sources were combined with seasonal grazing. The disappearance of characteristic features of Harappan material culture, such as seals and weights, indicates a breakdown in administrative and elite communities. However, other features of material culture do continue, including some pottery and ornament styles. Lustrous Red Ware pottery, which was being used along with Harappan pottery during the final stages of the Harappan culture, continues until around 1400 BC (Sonawane 2002). The Lustrous Red Ware pottery is also often found in association with a style of pottery referred to as Black and Red ware which has strong cultural affinities to peninsular sites. Furthermore, the discovery of Lustrous Red Ware pottery at the sites of Navdatoli (Phase III) and Ahar

(Phase IC) provide additional support for interaction to the east rather than with the west. The Late Harappan settlement patterns in Gujarat and changes in material culture reflect the gradual breakdown of the earlier Harappan state organization and the decentralization of political power. After 1400 BC there is a break in the archaeological record at most sites until around 600 BC when another diagnostic style of pottery appears. This is the distinctive Northern Black Polished Ware that is associated with the Early Historic Period (see below).

In summary, the period following the Indus civilization shows different trajectories in each major region. Based on the settlement hierarchies, most of these regional cultures appear to have been organized as chiefdoms except for the multiple tiered settlement system of the Cemetery H or Late Harappa cultures of the Punjab that may have continued as state level societies. Broadly contemporary with the Indus Tradition, other adjacent regions were undergoing their own local trajectories of social and political change.

Helmand Tradition

Situated to the west of the Indus Valley, the Helmand Tradition of Afghanistan represents a parallel urban state level society that was roughly contemporaneous to the Indus cities (Shaffer 1992). The integration of this region into complex chiefdom or state level society can be dated from around 2800-2300 BC (Shahr-i-Sokhta Phase). Unlike the Indus cites, sites such as Mundigak and Shar-i-Sokhta reveal centralized monumental architectural structures that have been identified as palaces. Although it is not certain if these settlements were ruled by kings or simply by a dominant clan, they appear to have been politically and ideologically different from Indus cities.

Bactro-Margiana Tradition

The emergence of complex chiefdoms or hierarchical state level society is also seen in the Kopet Dagh, in Central Asia from around 2800 -2100 BC (Hiebert 1994; Hiebert 1995). Settlements were surrounded by a strong mud brick fortification wall with defensive gateways. Increased status differentiation is seen in burials and elaborate styles of ornaments and tools were produced by local craft specialists. From 2100-1900 BC interaction with the Indus Tradition is documented, but it does not represent a major cultural impact between the two regions. The final phase of Central Asian integration (also referred to as the Oxus civilization) lasts from 1900-1500 BC and is called the Bactro-Margiana Archaeological Complex—BMAC (Hiebert 1995). This tradition appears to encompass much of Baluchistan and the area previously dominated by the Helmand Tradition, and even extends out onto the Kachi Plain near Mehrgarh. Heavily fortified towns with multiple concentric walls and complex multi-roomed structures were constructed using mud brick. Although each fortified site may have been a separate political unit, similar to historical warlords or "khanates", almost identical styles of ornaments, seals and tools were being used by elites in each of the settlements. Many of these distinctive objects have been found at sites in the Indus Valley, primarily during the time period between 1900 and 1750 BC. The presence of these Central Asian artifacts in the Indus valley sites indicates that there was considerable trade and the movement of people to and from the highlands.

The emergence of stratified society is assumed on the basis of burials with large hoards of gold and ritual objects that have been found in Central Asia and Baluchistan. Graves with less opulent grave goods have been found at the edges of the Indus valley in the Kachi plain. The pottery, stone or faience ritual objects are broadly similar to those found in

Central Asia. The culture that is represented by these burials disappears around 1750 BC in the Indus plain and by 1500 BC in the western highlands. Although many scholars have proposed that the Bactro- Margiana region was inhabited by Indo-Aryan speaking communities, there is no linguistic evidence to support this. Even if these communities did speak Indo-Aryan languages and practice Vedic style sacrifices on fire-alters, there is no indication that political or military leaders from Bactria or other regions of Central Asia invaded the Indus valley and established a new cultural tradition in this area despite the evidence of other forms of contact.

Ganga-Vindhyan Tradition

Throughout the Ganga-Yamuna river valley and the Vindhyan plateau to the south, there is evidence for the emergence of scattered agricultural settlements that are associated with the Regionalization Era of the Indo-Gangetic Tradition (4000-1000 BC). These settlements were probably organized as chiefdoms and the most powerful of these were located at crossroads and along the trade routes that linked the Gangetic plain to the Vindhyan region and to the Deccan plateau in the south (Gaur 1997). Due to the absence of written records and relatively few seals with geometric designs (only found at Hastinapura (Lal 1954-55) and Noh and not at all like those of the Harappan period), the social or political organization of these settlements is relatively unknown. Distinctive pottery and artifact traditions indicate that regional cultures were becoming established and there is a continuity of development that links these Chalcolithic and early Iron Age settlements to later polities and city states that are documented in literary traditions.

Important pottery styles that are associated with these chiefdom level communities are Ochre Colored Pottery and copper hoards, Painted Grey Ware pottery, black slipped

wares and eventually Northern Black Polished (around 800 BC). Hand formed Black and Red wares are found throughout the region and extend into the Deccan plateau to the south. None of these sites have been excavated horizontally, but the early layers generally reveal the use of small circular huts, followed by mud brick structures and eventually the use of baked brick. During the Painted Grey Ware period (1200-800 BC) none of the settlements were fortified, but the site of Jakhera had a large mud embankment and moat on the side facing the river. This massive embankment may have been constructed as flood protection, and similar embankments were constructed around many later sites during the early Northern Black Polished ware period (800-600 BC). By around 500 BC, the mud brick embankments at sites such as Kaushambi, Rajgir, Pataliputra, Sravasti, and Ayodhya also served as fortifications (Erdosy 1995). Most of the larger of these archaeological settlements can be linked to capital cities of chiefdoms that are identified in the *Vedas, Puranas* and the Epics (see below).

Malwa-Rajasthan Tradition

At the same time as villages were emerging in the Indus Valley and the Gangetic regions to the north, small settlements of agro-pastoral communities were being established throughout Gujarat and Rajasthan as well as in the Malwa Plateau, along the Vindhyan range and into the northern Deccan region (Shinde 2002). In Gujarat, early Chalcolithic cultures (circa 3700-3600 BC) at sites like Loteshwar and Nagwada may have had links with the Early Harappan (Amri and Kot Diji Phase) cultures of Sindh. In central Rajasthan the early Chalcolithic (3200-2600 BC) is well documented at the large sites of Balathal and Gilund, but there is no evidence of direct interaction with the Indus valley. In north Rajasthan, the Ganeshwar-Jodhpura culture (Agrawala 1984) or its

antecedents may have had direct contact with Indus civilization through the trade of copper objects beginning as early as the Ravi Phase and continuing on through the end of the Harappa Phase (circa 1900 BC). Further analysis is needed to determine if copper from the northern Aravalli came in the form of ingots, or as finished tools.

None of these communities developed into state level society, but some sites such as Inamgaon, Balathal and Gilund may represent regional centers (Shinde 2002) and were possibly organized politically as chiefdoms. The main evidence for chiefdom level society is the presence of both large and small sites that indicate a settlement hierarchy. Regionally defined ceramic styles, craft specialization and regional trade networks are also important indicators of social complexity. At Inamgaon the discovery of a large house and distinctive burials are thought to represent community leaders or chiefs (Dhavalikar 1986). Monumental architecture, such as fortifications, and complex parallel walled structures and compartmented buildings at Gilund and Balathal also indicate social hierarchy and the need to maintain order. A cache of terracotta sealings made from geometric seals were found in a pit at Gilund reflects the control of some commodity. Stylistic similarities between the Gilund sealings and terracotta or copper seals from sites such as Jhukar, Chanhu Daro and possibly even Lothal or Harappa, may indicate some sort of trade or elite interaction between these various regions.

Deccan Tradition

As with the other regions mentioned above, the Deccan plateau also saw the rise of large settlements that were probably inhabited by pastoral tribes or chiefdoms. Large ash mounds and habitation sites represent repeated occupation of specific areas many of which are associated

with later Megalithic monuments that date to around 800 BC (Paddayya 2002; Shinde 2002). Evidence for burning and conflict in some sites such as Inamgaon (noted above) suggest that there was conflict between competing communities. The time frame for this increase in competition corresponds to the historical accounts of movements of Vedic communities from the Punjab and Ganga regions that is, in the first millennium BC. (see below).

Proto-Historic and Early Historic Chiefdoms and States

Indo-Gangetic Tradition	
Regionalization Era	
Chiefdoms (represented in the Vedic texts)	1500-800 BC
Painted Grey Ware	ca. 1200 to 800 BC
Northern Black Polished Ware	900/700/500 to 300 BC

The social and political transformations occurring between the prehistoric and the historic period are quite complex and cannot be explained using simplistic models of invasion or migration that were used by archaeologists and historians in the past. The sources that provide information on this time period include the archaeological record, narratives from the Vedic texts, and linguistic evidence from the textual sources.

Archaeological evidence indicates the emergence of new regional cultures in the Indo-Gangetic divide, the Ganga-Yamuna Doab, Gujarat, Malwa-Rajasthan, the Vindhyan and Deccan regions. The most widespread pottery traditions in the northern subcontinent have been identified as the Painted Grey Ware Culture (1200-800 BC) (Tripathi 1997) and the Northern Black Polished Ware Culture (700-300 BC) (Roy 1986). Small villages grew into large fortified cities, many of which can be identified in the literary texts (Erdosy 1995). New technologies were being created alongside older

technologies and subsistence systems. Rice and millet agriculture became widespread in regions watered by the monsoon rains, the use of iron tools and the horse became commonplace. Geographical and cultural areas that were once core and periphery from the perspective of the Indus cities become reversed with the establishment of new political centers in the Ganga-Yamuna region and the northern portion of the Indus plain between Taxila and Peshawar.

Narratives from Vedic texts provide information on material culture and social organization used by Vedic communities in religious rituals, but it is difficult to define historical chronology or precise geographic locations. In the section below, aspects of Vedic material culture will be discussed that might be preserved archaeologically, followed by more detailed discussion of the actual archaeological evidence from sites of the Painted Grey ware and Northern Black Polished ware periods.

Vedic Material culture

Being nomadic pastoralists, and occasionally farmers, the Vedic communities had a range of material culture that would be relatively indistinguishable from any other pastoral or farming community in the world. The main artifacts or physical structures that are thought to distinguish Vedic culture from non-Vedic culture are ritual fire altars, the use of the horse and other animals for sacrificial purposes (Jha 1999), and the conspicuous lack of writing (Dandekar 1947). A brief summary of the major types of Vedic ritual structures and paraphernalia as represented in the Vedic texts is provided below. It should be noted that due to the lack of a writing system, the language and oral traditions, which are the most distinguishing features of Vedic culture would not be preserved archaeologically. The comparison has therefore to be restricted to parallels within archaeological data.

Ritual structures and Architecture

During the Vedic period no temples were constructed for ritual purposes or for housing the symbols of the divinity (Jha 1999). Permanent images or iconic forms are not usual as is evident from the single passing mention of an image of Indra. Iconic symbols were however used by other communities and the *Vedas* refer to the Dasas as worshipping the phallus (Dandekar 1947). The descriptions of elaborate Vedic rituals and the construction of fired brick altars are from the Vedic corpus dating to the first millennium BC and therefore generally later than the *Ṛg Veda*. Although it is possible that some earlier brick altars were constructed, so far no archaeological remains of structures associated with these rituals have been discovered or dated to this early period, though later altars have been discovered (Nautiyal and Khanduri 1989).

When a ritual had to be performed a sacrificial ground was selected, carefully measured and demarcated, and this was done for each new performance of ritual. Different areas within the demarcated sacrificial zone were devoted to specific rituals. A temporary structure of bamboo and thatch was constructed over the sacred space and was burnt at the termination of the ritual.

Ritual Paraphernalia

Physical objects used in Vedic rituals were usually made specifically for each ritual and burned or ritually broken after the completion of the ceremony (Staal, Somayajipad and Nambudri 1983). Wooden ladles and spoons were used to pour out butter and sprinkle water but such objects would not be preserved in the archaeological record. Many different shapes of pottery vessels and dishes were made by hand forming, but it is not clear if they were distinct from domestic pottery or not and therefore it is difficult to distinguish ritual

vessels from everyday domestic vessels. The only clear indicator would be pottery with evidence for intentional breakage as is found on the slopes around modern temples or near cremation grounds.

Specific pottery shapes might have counterparts in archaeological data such as the globular pots for the soma drink or open bowls and flat dishes for other offerings. But much of what was used would not have survived for any length of time such as bull hides, woolen strainers, antelope skins, wooden drills, etc; used in the Soma ritual. Similarly the sacred thread and special clothing for initiation would have been short-lived as also the grass mats for the priests.

Funerary traditions

Cremation is the most commonly described funeral ritual in the *Vedas*, but texts refer to the dead who were "not burnt", were buried in the earth (*anagnidagdha* Rv. X.18.11), exposed or thrown away (Dandekar 1947). In later texts dating to around 800 BC, there are detailed instructions on how to collect bones that have been exposed for a specified length of time and place them in a pot with a lid that is then buried in a pit (Grihya-Sutra 4.4.1 and 4.5.1 to 6). In one ritual (*pitṛmedhayāga*) the bones of the dead ancestor were taken into the forest, arranged in their anatomical position to create the human form, and covered with sacred *kuśa* grass and a water plant (*śaivāla*).

It is clear from the preceding summary that the only archaeologically preserved artifacts that might distinguish settlements inhabited by early "Vedic ārya communities" would be fired bricks possibly used to make special types of fire altars, broken globular pots that showed little evidence for long term use in the home, post holes for the sacrificial posts associated with sacrificial fires, and some rare ritual implements made of precious metals. Specific animals

associated with sacrifice included the horse, cattle, sheep, goats and even the dog (for sacrifices to *Yama*, the god of Death). Due to the fact that sacrifices were undertaken on freshly prepared ground, and that burned bones and ash were often scattered after the end of the ritual, the precise identification of such sacrificial events is highly unlikely.

Archaeological sites excavated throughout the northwestern subcontinent reflect the accumulation of domestic garbage and do not appear to represent the type of sacrificial altars described in the Vedic literature. It is also clear that the types of archaeological remains from the communities referred to in the texts, and which have been labeled by some as "Vedic ārya", would be very different from those found at Harappan sites discussed above. So where then is the archaeological evidence for communities that have been described as "Vedic ārya"?

Archaeological Evidence for Vedic Chiefdoms and Early States

The archaeological evidence for the presence of chiefdoms and states during and immediately after the Late Harappan period is quite complex and based on a combination of data from settlement pattern studies and excavations. Earlier scholars tended to focus on identifying intrusive cultures that came into the subcontinent from the northwest. The Gandhara Grave culture and the horse and camel using communities represented at sites such as Pirak, have distinctive elements that could associate them to Vedic culture, and even though the horse and camel did spread across the northern subcontinent, the pottery of Pirak and the gray pottery of the later Gandhara Grave culture did not spread across the northern subcontinent and therefore cannot be associated with the events described in the *Ṛg Veda* or later texts.

Two major archaeological traditions that provide more convincing evidence of links to Vedic culture are the Painted Grey Ware culture (1200-800 BC) and the Northern Black Polished Ware culture (700- 300 BC).

Painted Grey Ware Culture

The communities who used Painted Grey ware were farmers and herders living in small villages scattered across the land between the Ganga and the Yamuna rivers as well as in the area known as the Punjab where Harappa was located (Lal 1997; Roy 1983) (Figure 12). The Painted Grey ware culture and an earlier Ochre Colored Pottery culture (Dikshit 1978; Gaur 1974) which may represent Late Harappan communities provide the most convincing archaeological evidence for the transition from the Harappan to the Early Historic period. The size and distribution of these settlements in a two to three tiered settlement hierarchy and shared material culture indicates the presence of small chiefdoms that are linked together with a shared culture and beliefs. The shared beliefs are indicated in the use of similar types of ornaments made of terracotta, stone, faience and later glass. Terracotta human and animal figurines are also found at Painted Grey ware sites. The animal figurines include cattle, horse, and wheeled rams that may have also been used as toys. Incised terracotta discs with decorated edges and geometric motifs also may have had ritual meaning. Some archaeologists have proposed that they may be symbols of specific deities. In addition there is evidence for the use of square, rectangular, wedge shaped bricks, but since these are not associated with any domestic architecture, it is possible that they were used in ritual structures that were later disassembled or allowed to fall apart. The lack of detailed reports on the precise patterning of such artifacts makes it difficult to present any conclusive statements about their use. Overall, the social and political

organization represented at Painted Grey Ware sites tends to correspond with the chiefdom level society possibly similar to that represented in the Vedic texts.

At some sites, such as Bhagwanpura (Joshi and Bala 1975-76), there is an overlap between the Late Harappan communities, which continue until around 1000 BC in the Ganga-Yamuna region, and the Painted Grey Ware culture, which is generally dated from around 1200-800 BC. The sites where painted grey ware pottery and other related wares, such as "burnished black ware", "soapy red ware" and "back and red ware", are found are distributed across a wide region from Taxila in the northwest, along the foothills of the Himalayas, along the dry bed of the Ghaggar Hakra river, in the Malwa plateau and as far east as the central Ganga plain. Many of these sites also have pottery with red slip and black painted designs that can be linked to the Late Harappan period. Generally speaking there is no clear planning of these settlements, but some houses are oriented north south - east west, as was common during the Harappan period. At some settlements large mud brick platforms and surrounding embankments were constructed to protect the settlement from floods.

Most of the settlements were relatively small, about the size of a small village in modern times, with only a few thousand people living in the settlement. Settlement surveys of Painted Grey Ware sites in the Ghaggar-Hakra river valley, northern Hāryana, and the Ganga-Yamuna Doab have revealed the presence of two to three tiers of settlements, with the largest towns ranging from 13.7 to 9.6 hectares in area, smaller settlements from 5 to 2 hectares in area and hamlets or nomadic settlements less than 2 hectares in area (Erdosy 1995; Lal 1983). The total number of sites in the Indo-Gangetic divide decreased after the Late Harappan period, while the number of sites and the total occupied area

in the Ganga-Yamuna Doab to the east increased.

In terms of chronology, the earliest Painted Grey Ware sites, which show an overlap with the Late Harappan and also do not have iron tools, are found in the Punjab. Later sites with iron tools are concentrated in the Indo-Gangetic divide and the Ganga-Yamuna Doab. The presence of numerous Painted Grey Ware settlements in the Kurukshetra district is important because this is where the *Mahābhārata* battle is thought to have taken place (Lal 2002). These patterns can be correlated to the literary evidence for hierarchical chiefdoms and states during the late Vedic period in the Kurukshetra region. Many of the Painted Grey Ware sites in the Gangetic region continued to be occupied during the subsequent Northern Black Polished Ware period. The fact that sites further to the east, such as Kaushambi date to a later period and show a gradual evolution from late Painted Grey Ware culture to Northern Black Polished ware culture is taken as evidence for the gradual migration of communities to the east. This migration could be correlated to the textual references to migration from the upper to the middle Ganga region (Lal 2002).

Another line of evidence presented by some scholars is based on the names for many modern villages or towns, such as Hastinapura and Kaushambi, which correspond to names used in the *Mahābhārata* (Lal 2002). So far there has not been any positive correlation between the sites named in the epic texts and the archaeological sites, but the presence of many such site names in the general geographic locality of the epic suggests that the epic composers may have known this region.

Bhagwanpura (Joshi 1993) is located in the district of Kurukshetra (Figure 11), just to the east of the Yamuna River, in the proximity of what is believed by some to have been the site of the epic *Mahābhārata* battle. The settlement was

occupied during the Late Harappan Period (dated at this site from 1700-1300 BC) and then continued to be occupied through the Painted Grey Ware Period (dated at this site from 1400-1000 BC). What is most significant about this settlement is that some layers show a mixing of these two cultural periods, suggesting that for a time, people using both Late Harappan and Painted Grey Ware pottery lived together in this village. Over time the Late Harappan pottery was gradually replaced by Painted Grey ware pottery and other changes include the introduction of glass bangles and the horse. Bhagwanpura may represent the type of village that would have included both local Late Harappan people descended from the earlier Harappan cultural tradition and communities who were using new types of pottery and the horse. In most Painted Grey Ware sites, copper tools were used in the earliest levels and iron tools begin to be used in the later levels, around 1200 BC or slightly earlier. While it is not possible to determine the religion or language of the Painted Grey Ware culture, most scholars agree that there seems to be a correlation with some of the material culture described in the later Vedic texts.

The evidence for more than one group of people living at Bhagwanpura is seen in the use of different types of houses, some were circular while others were rectangular. Some houses also had many smaller rooms, and may have been the homes of powerful leaders or chiefs. Another interesting clue is that although the houses were all made of mud brick or reeds, the people did make fired brick, which were relatively thin and square, rectangular or wedge shaped. Since the bricks were not used for houses it is possible that they were used for making special ritual altars like those recorded in the *Ṛg Veda*. Archaeologists have found traces of elaborate ritual altars made from similar types of bricks, but generally quite thick and heavy, in somewhat later periods. Special

types of thick and heavy fired bricks are still made today for the construction of the special bird shaped fire alters used in the *Agnicayana* fire sacrifice. Other similarities are their use of the horse as well as iron tools. We do not have clear evidence whether the horse was used in transport, but that it was an animal of status is clear from its role in ritual sacrifice associated with burials at some sites. However, further studies of the bones and their deposition patterns need to be carried out to better understand the overall use of the horse during this period.

Northern Black Polished Ware Culture

The major cultural tradition that follows the Painted Grey Ware Culture is generally referred to as the Northern Black Polished Ware Culture (Roy 1986) (Figure 13), but there are in fact several regional variations of this cultural tradition that use different styles of pottery. The classic NBP ware appears around 700 to 500 BC in the core regions of the northern subcontinent. The earliest dates for NBP are from Hastinapura, in the core area of the Ganga Yamuna Plain (752, 709, 530 BC). In the northwest, sites such as Taxila/Hathial and Charsadda have NBP ware and other related styles of pottery that were dated by comparison with the Ganga sites to around 550 BC (Marshall 1951). Recent excavations in the Bannu district at the sites of Akra (900-790 BC) and Ter Kala Dheri (1000-400 BC), have provided more accurate radiocarbon dates that would push the chronology for the NBP at Taxila and Charsadda to as early as 900 BC (Khan, Knox et al. 2000). Although no complete settlement studies have been carried out, there is some indication of a two or three tiered settlement system in the northwest. Other sites in the central Punjab, such as Shorkot, Bawani and Harappa, and Pirak have pottery that is comparable to the pottery found in the early layers of Taxila/

Hathial and Charsada.

Sites such as Bawani and Shorkot have been known since the early surveys of Cunningham (Cunningham 1924 (2002)), but their presence has been long overlooked by historical archaeologists. Full-scale excavations need to be carried out at these sites in order to fill in the vast blank area that is usually seen on maps of the region for this time period. These sites may provide the most concrete evidence for the presence of communities in key areas of the Punjab and Indus Valley that have been mentioned in the literary texts. For example, during the 5th to 4th century as recorded by Pāṇini in the *Aṣṭādhyāyī* the Sauvīra were people living in northern Sindh, the *Brāhmaṇaka* in southern Sindh, and the *Madra* in the Ravi-Jhelum doab.

Even without the aid of literary texts, the archaeological record from sites at the end of the Painted Grey Ware period and early Northern Black Polished Ware period indicates increased social hierarchy and stratification, both within the sites and between sites. The settlements with Northern Black Polished Ware and other related pottery styles are more numerous and more widespread than the earlier Painted Grey Ware. During the Northern Black Polished Ware period, the settlement patterns in regions such as the Ganga-Yamuna Doab revealed a four or five-tiered pattern that corresponds to a stratified economic and political system consistent with complex chiefdoms and early state level society.

The overall population estimates for surveyed sites indicates significant population growth in the Ganga-Yamuna Doab beginning in the Painted Grey Ware period and continuing on through the Northern Black Polished Ware period (Lal 1988). This population growth could be attributed to migration of agricultural and pastoral communities, (some of whom are mentioned in Vedic texts), from the Punjab to the rich agricultural regions of the Gangetic plain, as well as

the agglomeration of tribal populations to agricultural villages and towns. The emergence of larger towns and eventually cities occurred at major cross roads and market centers. Most importantly some Northern Black Polished Ware sites became much larger and were protected from flooding by massive mud brick and earthen ramparts that eventually came to be used as defensive walls. Iron became more commonplace and a significant increase in iron weapons indicates a rise in warfare and military technology.

The diagnostic artifact found at most Northern Black Polished Ware sites is the high fired and black burnished pottery called Northern Black Polished Ware (Hegde 1962), which is considered a luxury ware used primarily by elites. This elite ware is not represented at all sites, and other types of pottery used to date this period include burnished black ware, black and red wares and "soapy red wares". Trade networks that had been disrupted at the end of the Harappan period were once again opened up, bringing marine shell to inland sites and lapis lazuli from northern Afghanistan to markets throughout the northern and central subcontinent. In the later part of this period, seals with inscriptions in Brahmi script, punch marked coins and stone weights for control of trade and taxation begin to appear.

While many sites show continuity from the Painted Grey Ware to the Northern Black Polished Ware period, there are some sites that were only occupied from the beginning of the Northern Black Polished ware period. The fact that many of these sites, such as Ayodhya and Sringaverpura are also mentioned for the first time in the *Rāmāyaṇa* has led some scholars to argue that most of the events recorded in this epic occurred after the time of the *Mahābhārata* (Lal 2002).

Conclusions

The one topic that has not been discussed in this article is

the origin of Indo-Aryan speaking communities. These communities are difficult to identify from archaeological data where there is no evidence for the language used by the particular culture. There is no archaeological evidence for invasion, or even large-scale migration into the northwestern subcontinent, but there is considerable evidence for trade and interaction between the Indus and the regions to the west and north, beginning with the Neolithic period (7000 BC) and continuing up to the Late Harappan times (1900 BC). In contrast to these earlier times, there is no clear evidence of trade during the Late Harappan period itself (1900-1300 or 1000 BC) or even in the subsequent Painted Grey Ware period (circa 1200-800 BC). However, the use of the horse did spread across the northern subcontinent during this period and this indicates the presence of some degree of cultural interaction. The spread of the horse could have occurred without the spread of actual people so we must continuously remind ourselves that the presence of horse bones at a site does not define the spoken language of a community. When the horse was first introduced into the New World during European colonial expansion, it rapidly diffused into regions that were not dominated by European language speaking communities.

Given these complications, we must ask ourselves if archaeological evidence can ever be correlated with linguistic models about the origins of the Indo-Aryan speaking communities of South Asia? The linguistic evidence suggests that Indo-Aryan speakers migrated from regions to the west and north (see Deshpande in this volume). If they came in gradually over hundreds of years they may have periodically interacted with the people already settled in the region. As nomadic pastoralists or small-scale farmers it is quite likely that their settlements are buried under meters of silt and windblown sediments. The challenge for archaeologists today

is to search for these ephemeral sites and begin to understand the complex cultural mosaic that was present in the prehistoric and proto-historic period. Without the actual presence of writing that can be deciphered; we may never be able to determine the languages spoken by these communities, but eventually we should be able to sort out some of the major cultural transformations that were taking place.

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Aryan Origins: Brief History of Linguistic Arguments

Madhav M. Deshpande

Introduction

The discussion of the terms 'Ārya' and 'Anārya' is normally dominated on the one hand by linguistics and archaeology, and, now more increasingly in the context of politics of knowledge as reflected in colonial and post-colonial histories of South Asia. Even in the ancient and classical period which is dominated by the discourses of the Hindu Dharmaśāstras (and Epics) on the one hand, and the contesting traditions of Buddhism and Jainism, these terms have played an equally significant role expressing conceptions of linguistic, ethnic, moral and spiritual identity, purity, and superiority. I have discussed many of these issues in my previous studies (see: Bibliography). Here, I wish to review primarily the linguistic side of the Aryan question and describe where the linguistic arguments stand at present. In the literature of linguistics, the term Aryan is used to refer specifically to those who were speakers of Indo-Iranian languages, the Indo-Iranian itself being a branch of the larger Indo-European language family. The term Ārya as a self-referring ethnic term is seen

only in the ancient linguistic materials found in Iran and India. The ancient linguistic material of the Indo-Iranian branch consists of the Vedic texts of ancient India, and the Avestan and Old-Persian texts of ancient Iran. Linguistically related material is found in the treaty of Mitannis in Anatolia dating to the 14th century BC, though the word Ārya is not found in that region to my knowledge. Thus, in the careful linguistic use of the term Aryan, it is used to refer to speakers of Indo-Iranian languages. However, in less careful, but apparently quite extensive usage, the term is sometimes used to refer to the entire Indo-European language family. With the uncritical equation of language and race in the nineteenth century, the term Aryan came to assume a racial significance, and it was extensively used in that manner by western historians, by the Nazis, and still continues to be used that way by white supremacist groups in many parts of the world, cf. Day (1994). The term Aryan, influenced by its usage in Europe, also appears in racist sense in many Indian writings of the 19th and 20th centuries, cf. Deshpande (2005). In the 19th century India, the term also came to be used to refer to a revivalist purist Hindu identity by groups like the Ārya Samāja, and it continues to vibrate with Hindu nationalist groups till today. This widely divergent and multi-valent usage of the term Ārya in the available literature of the last two centuries has complicated our understanding of the historical situation, which needs a careful sorting of the various meanings of this term, before one can deal with specific historical reconstructions. I do not believe that we can explain the linguistic make-up of ancient South Asia, without the assumption of migration of the speakers of a branch of Indo-Iranian into the sub-continent and their gradual contact and convergence with speakers of other languages such as Dravidian and Austro-Asiatic. Such a migration does not entail a concerted invasion of the region,

such as the invasion by the forces of Alexander the Great, but neither does this necessarily require the imperceptibly slow and non-warlike expansions of agricultural communities as suggested by the alternative Indo-European history of Colin Renfrew (1988).

I respect the caution expressed by Kenneth A.R. Kennedy (1995: 60): "Affirmations as emphatic as those voiced by the Allchins insure that the search for the Aryan presence in linguistic and archaeological sources will survive for some time to come. However, biological anthropologists remain unable to lend support to any of the theories concerning an Aryan biological or demographic entity within the contexts of linguistics and archaeology." Indeed, one should not go by the old identifications of linguistic, religious, and racial identities. However, Kennedy's conclusions are not really contradictory to linguistic research, if we understand that there is no correlation between racial and linguistic identities. People speaking the same language can belong to different racial backgounds, and people of the same racial background may speak different languages. If we dissociate linguistic, cultural, and biological identities, as we need to, then we can certainly find cases of distinct linguistic identities where one would be hard-pressed to find biological differences. The speakers of Indo-Aryan Marathi and Dravidian Kannada can hardly be distinguished from each other on biological grounds, and yet these two languages belong to different linguistic families. There is no reason why the Aryans and non-Aryans of the Vedic period or of Indus Valley could not be linguistically different without necessarily showing up biological differences.

The differences as expressed in the Ṛgveda by the terms *anindra* "those who do not worship Indra," *adeva* "those who do not worship Devas," *ayajyu* "those who do not offer sacrifices," *śiśnadeva* "those who worship phallic gods,"

mūradeva"those who worship images of gods" etc. are cultural differences. The term *mṛdhravāc* and possibly *anās* are indicative of linguistic differences. While the outsiders can hardly tell the difference between a Sinhalese and a Sri Lankan Tamil, the differences are perceptible to the populations of Sri Lanka. Similarly, even if our biologists of today cannot distinguish between the skeletons of Aryans and Non-Aryans, there is no reason to deny to them the differences as they perceived; for a critique of Kennedy and others, see Ratnagar (1998) and (1999). When the Ṛgvedic poets invoke their gods to help the Ārya community and destroy the Dāsa/ Dasyus, we are dealing with ethnically and culturally perceived differences. Within the Ṛgvedic period, there appears to have been a gradual move away from the earlier violent conflicts between the Ārya varṇa and the Dāsa varṇa (cf. *yo dāsaṃ varṇam adharaṃ guhā kaḥ*, *RV* II.12.4) toward some sort of co-operative and collaborative relationship between these two varṇas as hinted in *RV* I.179.6 : *ubhau varṇāv ṛṣir ugraḥ puposa* (cf. P.V. Kane, *History of Dharmaśāstra*, Vol. II, Pt. I, p, 25, fn. 53). In my publications (Deshpande, 1993a), I have dealt with the details of how a slow inter-ethnic convergence may have come about in ancient India, and how the ancient Indian terminology of *bīja-kṣetra* "seed-field" provides access to a cultural understanding of biology.

In this connection, we have a lot of terminological dilemmas to deal with. For example, when we use the word "Ārya," what do we mean by such a word? We know that the word was used as a self-referring term only by the ancient Iranians and by the authors of the Vedic hymns. Kuiper (1991: 6) says: "[In the RV] 'Aryans' were in general those who maintained the world order by means of sacrifices and gifts...." Quite apart from the now-unacceptable racial interpretation of this term, Kuiper's definition makes this

term purely functional, and stretches it away from any association with a real or perceived ethnicity. On the other hand, consider Franklin Southworth's comments: (1995: 261): "Therefore, while it is appropriate to refer to 'speakers of Proto-Dravidian' or 'members of the proto-Dravidian speech community,' or 'speakers of Old Indo-Aryan,' or even (when justified) 'Dravidian-Old Indo-Aryan bilinguals,' the use of labels such as 'the Dravidians' or 'the Aryans' is not justifiable in linguistic terms. In fact, their use in any context is problematic, since they can only be justified by demonstrating the existence of a group which both spoke the language in question and possessed particular attributes."

But before getting into a review of the purely linguistic arguments, it is useful to see the range of usage of these terms in premodern literature. For example, the term Ārya referring to an ethnic identity occurs in the Ṛgveda, sometimes in conflict with other communities called Dāsas and Dasyus, sometimes in alliances with them as in the famous War of Ten Kings (*dāśarājña*), and sometimes even in a balanced complementarity. We can also usefully compare Manu's Lawbook with the warning issued by the linguist Franklin Southworth (1995: 261). A term like 'Ārya,' as the usage of the Dharmaśāstras shows, was indeed used in linguistic, ethnic, and moral contexts, and that it also had extensions into designations of regions. Manu (10.57) says that one should determine the low-status of a person who looks like an Ārya (*āryarūpam iva*), but is an Anārya (*anārya*), on the basis of his actions (*karmabhiḥ svair vibhāvayet*). This verse shows that there was indeed a prototypical expectation of how an Ārya person looks like, i.e. his physical features (*āryarūpa*). In this context, the word *rūpa* "form, appearance" does not appear to have any symbolic meaning. This indicates that the physical features which were associated with a prototypical Ārya were indeed not restricted to only those

who were socially recognized as Ārya. Manu, however, does not specify the Ārya physical features, though Patañjali's Mahābhāṣya (on P.2.2.6) does say that normally one would not recognize a person "dark like the heap of Urad lentils" (*māṣarāśivarṇa*) sitting in the market place to be a Brahmin, and that a Brahmin is normally expected to look *gaura* "fair," *śucyācāra* "with clean conduct," and *piṅgalakeśa* "with tawny colored hair." Manu recognizes that confusion extended also to the use of languages. Manu (10.45: *mukhabāhūrupajjānām yā loke jātayo bahiḥ/mlecchavācaś cāryavācas te sarve dasyavaḥ smṛtāḥ //*) indicates that there are people all over the known world who speak Ārya and Mleccha languages, but the use of language cannot be taken as a factor determining their social identity. Outside the four varṇas, born from the head, arms, thighs, and feet of the creator, everyone is a barbarian Dasyu, whether he speaks an Ārya or a Mleccha language. This statement clearly says that speaking an Ārya language does not make a Mleccha/Dasyu into an Ārya. This gives us some sense of the baggage the term Ārya carries with it, and the baggage that we must recognize before a clearer sense of history can begin to emerge.

Beginnings of Indo-European Linguistics

Glimpses of the beginning of the modern study of Indian languages opened with encounters of Europeans with India. P. Sassetti, who was in Goa between 1581 and 1588, noted that Sanskrit had many words in common with Italian, "particularly in the numerals six to nine, in the names for God, snake, and many others," Lockwood (1971: 22). In 1767, P. Cœurdous asked the French Academy for the reasons for the striking similarities between Sanskrit, Greek and Latin, and he suggested that such similarities were relics of the primitive language of mankind after the confusion of tongues

at Babel. He compares, for instance: Skt. *dānam* 'gift,' *devās* 'god,' *jānu* 'knee,' *mádhyas* 'middle,' and *vidhávā* 'widow' with Lat. *dōnum*, *deus*, *genū*, and *vidua*, and also the present tense of the verb 'to be' : Skt. Sg. 1 *ásmi*, 2 *ási*, 3 *asti*, Pl. 1 *smás*, 2 *sthá*, 3 *sánti*, with Lat. *sum*, *es*, *est*, *sumus*, *estis*, and *sunt*. However, the credit for suggesting a common bond in the clearest terms goes to Sir William Jones, who declared in 1786 before the Royal Asiatic Society of Bengal in Calcutta:

> "The Sanskrit language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either; yet bearing to both of them a stronger affinity, both in the roots of verbs, and in the forms of grammar, than could possibly have been produced by accident; so strong indeed that no philologer could examine them all three without believing them to have sprung from some common source, which perhaps no longer exists. There is similar reason, though not quite so forcible, for supposing that both the Gothick and the Celtick, though blended with a very different idiom, had the same origin with Sanskrit; and the old Persian might be added to the same family."

It should be noted that while William Jones argued for a common ancestral bond between Sanskrit, Greek, Latin, as well as Germanic, Celtic, and Iranian languages, his words are important: "*sprung from some common source, which perhaps no longer exists.*" As Trautmann (1997, 1998) has demonstrated in detail, Jones was still working under the Biblical ideas of dispersal of languages after Babel, and did not look upon Sanskrit itself as the source of all Indo-European languages. It was Friedrich von Schlegel (1772-1829) who in his work *Über die Sprache und Weisheit der*

Indier published in 1808 declared Sanskrit to be the parent language, of which Greek, Latin, Persian, and the members of the Germanic branch were the more or less degenerate descendants, and more remotely connected were Armenian, Slavonic and Celtic languages. Schlegel based his conclusions on a comparative study of the vocabulary and grammatical structure of these languages. While the comparative method he initiated survived, his conclusions were soon overthrown. Laying the systematic foundations of comparative Indo-European philology, Franz Bopp in his *Über das Konugationssystem der Sanskritsprache in Vergleichung mit jenen der griechischen, lateinischen, persischen und germanischen Sprache* (1816) defined the position of Sanskrit within the Indo-European family: "I do not believe that Greek, Latin and the other European languages are to be considered as derived from Sanskrit ... I feel rather inclined to consider them altogether as subsequent variations of one original tongue, which Sanskrit has preserved more perfectly." In 1833, Bopp published his monumental work on Comparative Indo-European grammar: *Vergleichende Grammatik des Sanskrit, Zend, Armenischen, Griechischen, Lateinischen, Lithauischen, Altslawischen, Gothischen und Deutschen*. While William Jones deserves the credit for announcing the discovery of the genetic relationship between Indo-European languages, it was in Germany under Bopp and his successors that the science of Indo-European philology progressed with great speed.

A. Schleicher (1821-68) initiated the reconstruction of prehistoric Indo-European forms. By comparing the forms recorded in the daughter languages, one can imagine how the word looked in the parent Indo-European language. By comparing words for horse, i.e. Skt. *áśvas*, Gk. *híppos*, also *íkkos*, and Lat. *equus*, archac *equos*, and by assuming that Sanskrit has kept the vowels of the parent language,

Schleicher postulated **akvas* as the word for horse in the parent Indo-European language. Subsequent research pointed out that the reconstruction should rather be **ekwos*, since it had by then become clear that the vowel system of Sanskrit, far from faithfully reflecting the prehistoric stage, had in fact undergone sweeping changes which resulted in the transformation of both original *e* and *o* into *a*. Gradually it became clear that in certain respects the languages of Europe were more archaic than Sanskrit. "The discovery of the Law of Palatals was naturally a blow to the prestige of Sanskrit which philologists had hitherto assumed to stand close to the parent tongue" (Lockwood 1971: 28). The results of research in this field were crowned with the work of Karl Brugmann (1849-1919) and B. Delbrück (1842-1922). While other works of this period are now mainly of historical interest, Delbrück's *Grundriss der vergleichenden Grammatik der indo-germanischen Sprachen* (1886-1916) in five volumes remains an unequalled source of factual information and is indispensable for serious work on Indo-European linguistics. The position of Sanskrit within the Indo-European family as defined since the work of Brugmann and Delbrück has changed little within this field, even though great strides have been made in many areas of historical and comparative linguistics.

In the initial period since William Jones's declaration, it is evident that there was no clear understanding of a distinction between what later came to be called Indo-Aryan languages from the class of Dravidian languages. Among the traditional Sanskrit Pandits, there was a general belief that all languages other than Sanskrit were somehow derived from Sanskrit which was described by Daṇḍin as a Divine language (*daivī vāk*). This was evident from the usage of descriptive terms such as *tatsama* "words identical with those of Sanskrit," *tadbhava* "words (transparently) derived from

Sanskrit," and *deśya* "regional" words whose derivation from Sanskrit was not transparent. This terminology was widely used not only to describe Prakrit and Apabhraṃśa languages which historically belong to the Indo-Aryan family, but also to describe the languages that belong to the Dravidian family. I have described elsewhere that in the traditional Mīmāṃsā belief, even the so called Mleccha "foreign" languages were also ultimately derived from Vedic Sanskrit. Early western scholarship after William Jones also went through a phase that did not know distinct origins for Indo-Aryan and Dravidian languages.

19th Century Views: Gauḍa and Drāviḍa Linguistic Areas

There is a traditional classification of Brahmins of India into two groups. The northern group consisting of five sub-groups is given the title Gauḍa, while the southern group consisting of five sub-groups is given the title Drāviḍa, for a detailed analysis, see Deshpande (2002). The five sub-groups coming under the term Gauḍa are: Sārasvata, Kānyakubja, Gauḍa, Maithila and Utkala. The five sub-groups coming under the term Drāviḍa are: Gurjara, Mahārāṣṭra, Tailanga, Karnāṭaka and Drāviḍa. The early state of linguistic understanding in the post-Jones period is seen in the discussions of these groups and sub-groups by Colebrooke. In his 1801 article "On the Sanscrit and Pracrit Languages," Henry Thomas Colebrooke brings up this classification in the context of describing the linguistic geography of India. Without a hint that this is a classification of brahmins, albeit in different regions of India, Colebrooke (1801: 226) generalizes this into a classification of the "Hindu nations":

> "The five Hindu nations, whose peculiar dialects have been thus briefly noticed, occupy the northern and eastern portions of India; they are denominated the five

> *Gaurs*. The rest, called the five *Dravirs*, inhabit the southern and western parts of the peninsula."

Colebrooke had changed the context of the general classification away from a classification of brahmins to a classification of "Hindu nations" based upon their affiliation with language and regionality. Here too, he detected certain contradictions. He had doubts about the appropriateness of the classification of the Gurjaras among the Draviḍas, and the classification of the Utkalas among the Gauḍas. He says (1801: 229):

> "Considering the situation of their country, and the analogy of language and writing, I cannot hesitate in thinking that the *Gurjaras* should be considered as the fifth northern nation of India, and the *Uriyas* should be ranked among the tribes of the *Dacshin*."

What is difficult for us to understand is the exact basis upon which Colebrooke is making these judgments, because, as Trautmann (1997: 147) points out: "He ... derives all the major Indian languages from Sanskrit, excepting only those known to have come from the invasions of foreigners."

The fact that Colebrooke moved this classification into the area of linguistic geography set the course for the future Indological use of this classification in the works of his successors, where a clearer recognition of major differences between Indo-Aryan and Dravidian language families becomes evident. As Trautmann's research shows, The second discovery, that of the Dravidian language family, is usually credited to a missionary, Bishop Robert Caldwell, whose classic work, *A Comparative Grammar of the Dravidian or South Indian Languages*, was published in 1856. ... This, however, is mistaken. Fully forty years previous to Caldwell's book, in the very year in which Bopp was laying the

foundations of the comparative study of Indo-European languages in Europe (1816), Francis Whyte Ellis, Collector of Madras, published an elegant proof of the Dravidian language family. He showed that Tamil, Telugu, and Kannada shared a common stock of roots and forms of grammar that were different from those of Sanskrit, a finding he extended also to Malayalam, Tulu, Kodagu, and 'Rajmahali' or Malto, a tribal language of the Gangetic basin, far to the north" (Trautmann 2005: xxiii). The work of Ellis, and more widely the work of Bishop Caldwell, influenced the evolving understanding of the different language families in India, and a new understanding of the terms Gauḍa and Draviḍa as language groups in India began to emerge. In Caldwell's work (1856, 1974: 56-57), we see a contrast set up between "Gaurian Idioms" and "Dravidian Idioms." The languages included under the heading *Gaurian* are Hindi, Bengali, Marathi, Gujarati, and Sindhi. Under the heading *Dravidian* are listed Tamil, Canarese, Tulu, Malayalam, Telugu, Toda, Kota, Gond, Ku, Rajmahal, Brahui, and Oraon. The departure from the original context in the direction of a language-classification, since the writing of Colebrooke, is so complete in Caldwell that there is no oddity felt in listing Marathi and Gujarati among the *Gaurian* group. The terms are undergoing a process of redefinition and recontextualization. We see the same process in Rudolf Hoernle's 1880 work *A Comparative Grammar of the Gaudian Languages*. Hoernle (*Introduction*, p. i) explains his choice of the term *Gaudian*: "I have adopted the term Gauḍian to designate collectively all North-Indian vernaculars of Sanskrit affinity, for want of a better word; not as being the least objectionable, but as being the most convenient one." Referring to the specific languages, Hoernle (ibid) says: "Seven languages of the Sanskrit stock are usually enumerated as spoken in North India, viz. Sindhi, Gujarati, Punjabi, Hindi, Bangali, Oriya, Marathi." The languages of

Maharashtra and Gujarat, coming under the old *pañca drāviḍas*, are now listed as "languages of the Sanskrit stock ... spoken in North India." There is a newly emerging notion of a linguistic divide between Indo-Aryan and Dravidian, and this divide is expressed by using the old terminology of Gauḍa vs. Drāviḍa.

Early Indian Responses to Indo-European Linguistics

By the second half of the nineteenth century, there were several theories and counter-theories circulating in India, for details see Deshpande 2005. The newly emerging class of western educated Indians was absorbing the theories of Indo-European philology and Caldwell's notion of the separate Dravidian family, and was reacting to these new ideas in various ways. Early nineteenth century scholarly figures like Sir R.G. Bhandarkar, who was trained in Bombay and Pune under European professors, completely agreed with the conclusions of Indo-European philology of the time, and began to offer explanations of the emergence of various languages in terms of contact between Aryan and non-Aryan populations in India. Bhandarkar's contribution toward an understanding of the Aryan origins may be seen most profoundly in his *Wilson Philological Lectures on Sanskrit & the Derived Languages* delivered in 1877 in Bombay, and published in the form of a book in 1914. Referring to the progress of Indo-European philology especially in Germany, Bhandarkar says: "The progress made within about fifty years is marvelous, and affords a striking instance of the intellectual activity of the Europeans. In the cultivation of Philology and the elaboration of this new science the Germans, of all other nations, have been most prominent, and have done by far the greater portion of the work," (Bhandarkar 1914:5). Bhandarkar's explanations built on the hypothesis of various

migrations, contacts, and adaptations are seen in the following discourse: "Though [the speakers of Pali] heard conjunct consonants and the diphthongs *ai* and *au* pronounced by the speakers of Sanskrit, as correctly as the other letters which they did not corrupt, their organs were not fitted to utter them. These peculiarities may have been natural or acquired. If natural, the people who first corrupted Sanskrit into Pali must have belonged to an alien race which came into close contact with the Āryas and learnt their language.... And there is another instance in History of an alien race having treated the sounds of the language of a civilized community in just the same way. The Barbarians who overran Italy and developed the Italian from the Latin, showed the same inability to pronounce the Latin conjuncts, and assimilated them as our Pali ancestors did," (Bhandarkar 1914: 47). The process of the emergence of the Prakrits is accounted for by Bhandarkar by referring to the migration of the Āryas from "the land of the five rivers" to "the country known afterwards as Brahmāvarta and Kurukshetra." This is the country about Thaneśvar, where "they formed a consolidated community in which an aboriginal or alien race was incorporated and the language represented by the Pali was the language of that race," (Bhandarkar 1914: 88). The idea of the Āryas, the speakers of Sanskrit, coming into contact with non-Āryas, and such a contact leading to a degenerative transformation of Sanskrit into Prakrits is an idea not inherently alien to the Sanskritic tradition. But the same tradition does not admit any notion of history for this divine and eternal language, and here Bhandarkar's efforts to find historical origins of and developments in Sanskrit did not go well with his contemporaries. These were departures from the Sanskritic tradition. If the speakers of Sanskrit were Āryas, and if Sanskrit itself resulted from a process of transformation from its Indo-European precursors

and underwent later transformations of its own, were the Āryas themselves subject to transformative processes? If the transformations of Sanskrit into Pali were caused by the alien speakers trying to learn the Aryan language, what was it that caused the transformations which resulted into the very existence of Sanskrit itself, and what caused transformations within the very history of Sanskrit? Such questions indeed raise unpalatable issues, and Bhandarkar's own wording suggests that he, as a Brahmin, was himself caught in the middle. Bhandarkar's wording would suggest a belief that the Āryas were not in contact with non-Aryans in "the land of the five rivers." Even admitting that the Indus Civilization was not excavated by this time, one still finds this belief difficult to accept, particularly in view of the fact that there are north western Prakrits in Aśokan inscriptions, a fact which was known to Bhandarkar by this time. Bhandarkar finds that the northwestern Prakrits like Paiśācī, "appear to be truly Aryan. Perhaps then this was the language of an Aryan tribe that had remained longer in the original seat of the race, and was connected with the ancestors of the Teutons, so as to develop a phonetic peculiarity resembling theirs, and emigrated to India at a very late period and settled on the borders. Or it might be that the tribe came to India along with the others, but living in the mountainous countries on the border in a sort of rude independence, it developed this peculiarity of pronunciation.... Since under this supposition they could not have come in very close contact with their more civilized brethren of the plains, their language did not undergo some of those phonetic modifications which Sanskrit underwent in the mouth of the aboriginal races," (Bhandarkar 1914: 94). So the speakers of northwestern Prakrits were truly Aryan, uncontaminated by contact with the non-Aryans, but not as civilized as the speakers of Sanskrit who did come in contact with the "aboriginal races"?

Bhandarkar seems to believe that the Aryans were not in contact with aboriginal races until they moved from "the land of five rivers" into the interior of India. Thus the linguistic deviations from Sanskrit in the direction of Pali and other Prakrits are caused by the contact of the Āryas with the non-Āryas, while the linguistic deviations from Sanskrit in the direction of the northwestern Prakrits and other Indo-European languages are to be explained by "isolation" at best. This creates an interesting tripartite division: the ethnically pure but less civilized Āryas of the northwest, the pure civilized Āryas of the "land of the five rivers," and the uncivilized non-Āryas of the rest of the Indian subcontinent.

Bhandarkar's student at Deccan College, B.G. Tilak (1856-1920) disagreed with Bhandarkar's moderate political views and reformist social views, but basically accepted the conclusions of Indo-European philology, with a twist of his own. His first publication on the subject of ancient history was the book *Orion or Researches into the Antiquity of the Vedas*, published in 1893. His second publication was *The Arctic Home in the Vedas*, published in 1903. His third and the last publication on the subject was the book *Vedic Chronology and Vedāṅga Jyotisha* [*Containing also Chaldean and Indian Vedas and other miscellaneous essays*], written in 1913 in the Mandalay jail in Burma and published posthumously in 1925. Trying to find history in the *anādi* "beginningless" Vedas was a departure from the Brahmanical tradition, but such a departure, facilitated even though it was by the introduction of Western education, was the path chosen by Tilak.

Tilak was in basic agreement with Bhandarkar on the conclusions of Indo-European linguistic theory, and had particular admiration for the work of Max Müller. He viewed Max Müller not only as a great scholar of the Veda, but as someone who pointed out to the west the importance of the

spiritual contribution of India (cf. Tilak on Max Müller, *Lokmānya Ṭiḷakāṃce Kesarītīl Saṃkīṇa Lekh*, vol. 4, 1922, pp. 124ff. Also see Max Müller's obituary written by Tilak in *Kesarī*, November 6, 1900, ibid, pp. 573ff.). In his obituary of Max Müller in *Kesarī* (ibid, pp. 575-6), Tilak approvingly points out Müller's contributions to Indo-European philology and comparative mythology:

> "The efforts of the western philologists were given a new turn by their recognition of the ancient character of Sanskrit and their study of Pāṇini's general rules and their exceptions regarding the derivation of various types of words from stems and affixes. In the last thirty/forty years, German scholars have produced an entirely new *śāstra* 'science' of comparative philology. One must not forget that Pāṇini's work is the foundation of this new *śāstra*. ... The second consequence of the western study of languages was in the area of the study of religion. Before the birth of western philologists like Burnouf, Bopp, and Jones, the people in Europe were familiar only with one religious tradition that was born in the region of Palestine. ... This orientation of the western thinking on religion changed with their study of the Veda, Avesta, and the Buddhist Tripiṭaka, and with a great transformation of ways of thinking, the science (śāstra) of comparative religion was born. ... The notion that the civilized people in Europe and Asia must have originally belonged to the same human race and were speakers of the same original language gradually developed and was successively strengthened. It is necessary to understand this history to fully comprehend the true significance of Professor Max Müller's efforts, scholarship, and writings."

However, while Tilak admired Max Müller, he believed

that the purely philological approach of scholars like Max Müller was not sufficient to yield convincing results and that the astronomical method, though generally condemned by the philologists as being indefinite and unreliable, could be refined and used to make more exact predictions. In his own works based not so much on philology, but on astronomical evidence, Tilak argued that the ancestors of the Vedic Aryans, and possibly texts of the Vedas themselves came from the Arctic Home dating to a very ancient period of 8000 to 10000 BC. If one were to accept Tilak's dating of the Vedas and the ancestors of the Vedic Aryans, then the non-Sanskrit branches of Indo-European language family would all seem to be far younger than the Indo-Aryan branch. While this conclusion would make the Indian Aryans the senior, rather than junior, brothers of the colonial Western Aryans, and would boost the nationalist pride, Tilak did not systematically attempt to explain how he would derive all other branches of Indo-European from Sanskrit. Without explicitly claiming so, Tilak makes Sanskrit the oldest of all Indo-European languages, and hence a possible source of them all. As I have discussed elsewhere in detail (cf. "Arctic Home in the Vedas: Religion, Politics, and the Colonial Context," forthcoming), in spite of Tilak's political background, by the standards of the late 19th and early 20th century scholarship in the west, Tilak's geological and astronomical investigations had better scholarly foundations, than the openly Hindutva-motivated histories constructed by Savarkar, Golwalkar, and others.

However, in the nineteenth century Maharashtra, there was a continuing Brahmanical tradition that believed in the primordiality of Sanskrit and India as its homeland and holy-land, combined with a belief that all other languages were derived from Sanskrit through a process of degeneration (*apabhraṃśa*-ization). This goes back to Manu's Lawbook that all populations of the world ultimately originate from

the four primordial varṇas created by God in India, through mixing of the original varṇas and through migrations of various groups away from the Āryāvartic center combined with loss of dharmic behavior (*Manusmṛti*, chapter 10). Manu (10.43-44) lists Pauṇḍraka, Cauḍra, Draviḍa, Kāmboja, Yavana, Śaka, Pārada, Pahlava, Cīna, Kirāta, Darada, and Khaśa as original Kṣatriyas who slowly became Śūdras through loss of dharmic behavior and through non-contact with Brahmins (*kriyālopāt... brāhmaṇādarśanena ca*, Manu 10.43). This Brahmanical view, combined with the appropriation of modern knowledge of the Indo-European family and the emerging sense of Indian nationalism, appears in the works of authors like Narayan Pavgee, a contemporary of Tilak. While Tilak argued for the Arctic Home of the Vedic Aryans, Pavgee argued for the Āryāvartic Home of the Āryans, though he was willing to accept a theory that a branch of the Āryāvartic Aryans migrated to the Arctic region and eventually returned to India. With the Āryāvartic home of the Aryans, Pavgee was arguing against the notion that the Aryans came to India from outside. However, he was proposing that the Aryans spread across the world from the Āryāvartic home, and that Sanskrit was the mother of all languages of the world.

The second volume of his *Bhāratīya Sāmrājya* (1893) is titled: *Āryalok va tyāñce Buddhi-vaibhav* "The Āryan People and the Wealth of their Intelligence." The book begins with a section dealing with the original home of the Āryas (*āryāñce mūla-nivāsa-sthāna*). Pavgee asserts at the very beginning that the Vedas are the oldest literature of mankind, and that the Vedas support the notion that northern India is the original home of not just the Aryans, but of the entire mankind (Pavgee 1893: 2). The Aryan family of languages originated in India, Pavgee (1893: 5) asserts, and it expanded westward from India through the regions of Iran, Greece, Italy, Spain,

England, Germany, and Russia. Pavgee mentions the view of western philologists that the Aryans came into India from outside, but he does not support this view. In the ninth volume of his *Bhāratīya Sāmrājya* (1900), titled *Bharatakhaṇḍātīl Nānāvidha Bhāṣā* "Various Languages in India," Pavgee has a section on the original land of the Ārya language, i.e. Sanskrit. Pavgee asserts unequivocally that Sanskrit originated in the region of Āryāvarta within India and is the mother of all Aryan languages. All languages such as Marāṭhī, Hindī, Bengalī, Gujaratī, Iranian, Greek, Latin, German, English, and Polish were born from Sanskrit. They are daughters of Sanskrit (Pavgee 1900: 14). Various originally Ārya groups left their religion and castes and left the original Ārya homeland, and these eventually became the various branches of the Aryan language family. In support of this conclusion, Pavgee offers, not linguistic arguments, but a large number of passages from Smṛtis and Purāṇas (1900: 16ff), a practice continued in nationalist history writing till today, see papers in Deo and Kamath (1993).

From Linguistic Reconstruction to Racist Theories in the west

Returning to the history of western scholarship during the nineteenth century and the early twentieth century, one needs to keep in mind one major factor, namely that the Indus Valley Civilization was discovered only in 1920s, and hence all previous scholarship of the Indo-European philology developed in the absence of any knowledge of the Indus Valley Civilization. While the discovery of the Indo-European language family was to a large extent a result of linguistic scholarship, the scholars who were engaged in this scholarship often used discourses that merged the distinction between language and ethnicity or race, (Day, 1994, Leach, 1990, and Trautmann 1997 and 1999). Beginning with

William Jones, we find the use of terms like "nations" to refer to groups speaking particular languages, and words like "Semitic" and "Hamitic" combined both language and ethnicity, (Trautmann 1997 and 1998). With this mixture of terminology, the notion of a linguistic ancestor for the languages of the Indo-European family soon developed into finding an ancestral group of people, a nation or a race, that over time splintered into multiple sub-groups and these migrated from an original homeland to their eventual destinations where we find the descendant languages today. Today one can say with confidence that there is no necessary connection between language and ethnicity. The African blacks who speak French are linguistically as much Indo-European as white French speakers in France, just as the English-speaking peoples across the world speak an Indo-European language, though they belong to different races and ethnicities. Thus, linguistic identities are not necessarily related to racial or ethnic identities. However, the language of race was pervasively used by scholars in the nineteenth and twentieth centuries. In his early writings, Max Müller used the word Aryan in racial meaning, even though he later recanted: "There are Aryan and Semitic languages, [but] it is against all rules of logic to speak, without an expressed or implied qualification, of an Aryan race, of Aryan blood, or Aryan skulls," Max Müller (1880, 4: 223). Edmund Leach (1990: 235) points out that by 1878 Max Müller was writing without equivocation about "the Aryans" as if they were a racial group moving outward from some central Asian homeland by a process of conquest. "By the 1890's, the linguist Sir George Grierson was explaining all Indo-Aryan dialect distributions in northern India as due to past military conquest, a view that was repeated without criticism in the 1969 printing of the *Encyclopaedia Britannica*," Leach (1990: 235). We see the same pattern in the works of leading

European scholars like Hermann Oldenberg. Consider the following narrative from Oldenberg (1896, 1973: 39):

> "In the ancient times for instance, the Aryans of the Northwestern part of further India had not yet entered deep into the borderland by the use of force and were still the brothers and almost neighbours of the Zarathustrian Aryas of Iran, or rather of the Aryans who were opponents of Zarathustra. The situation changed in later times. Hinduism spread all along the peninsula *with the Aryan character ever weakening, with the blood of the natives mingling in their blood stream in a never-ceasing continuity and with an infinite series of shades of complexion, ranging from the fair to the dark, observable in the populace.* ... It will not do to mix up the old times with the modern times."

Such passages can be multiplied a hundred times indicating how wide the use of the racial terminology was. The racial terminology took different forms, e.g. the Aryans versus Semites in Germany, while in the context of colonial domains like India, the racial terminology made the relationships between the white Aryan British and the black Aryan Bengali ever more complicated—sometimes positively, though most of the time negatively. Does this mean that one must not connect migrations of peoples to linguistic changes, for fear of involving ourselves in racialist thinking? I do not think so. Theorizing from where we stand today, we need to take into account all forms of human interaction that involves language to evaluate the phenomenon of linguistic relationships, genetic or otherwise, as well as phenomena like various forms of intensive and extensive bilingualism and diglossia. The social context of language in its widest sense needs to be taken into account to explain facts of language, without insisting that a linguistic identity must be

co-terminus with racial, biological, religious, or political identities. These different identities do indeed intersect, but do not logically entail each other. These various forms of identities do affect language use, and may be taken into account with due caution.

Historical Linguistics after the Discovery of the Indus Valley Civilization

With the discovery of the Indus Civilization in 1920s began a new effort to make sense of the Indo-European migrations and the Vedic texts. Early on, the destruction of the Indus cities was connected with the Vedic Aryans led by their God Indra destroying the forts of the Dāsas and Dasyus. If this version of history is accepted then Indus was pre-Vedic and non-Vedic and was destroyed by Vedic Aryans. This most likely makes Indus a non-Indo-European linguistic region, and hence for decades various scholars, like Emeneau and Parpola, argued for a Dravidian identity for Indus. This was also supported by the consideration that Brahui in Baluchistan is a Dravidian language, and further by the claim of David McAlpin that Dravidian and Elamite of ancient Iran may belong to the same language family. Even though gradually the opinion shifted to the position that the Vedic Aryans entered the Indus area after the Indus cities had already declined and abandoned, the predominant linguistic opinion still held that the Indus Valley was a Dravidian speaking region. Decipherments of the Indus Seals by S.R. Rao and Madhusudan Misra, among others have claimed a form of proto-Sanskrit as the language of Indus, and the Vedic character of Indus civilization, though there is not a wide acceptance of these proposals, cf. for a review of recent proposals, see: Ratnagar (1996), Witzel (2002) and Mahadevan (2002). More recently scholars like Michael Witzel have suggested that the Indus area was most likely a

multi-lingual multi-ethnic region that may have included Dravidian, proto- or para-Munda, as well other languages (related to isolates like Burushaski), including forms of Indo-Iranian on the periphery. This suggestion seems to be most realistic to me, as it allows an open-ended examination of all available linguistic data.

As for the latest twist on the decipherment of the Indus seals, Farmer-Sproat-Witzel (2004) proposes that the Indus seal symbols do not codify a language: "Archaeologists have long claimed the Indus Valley as one of the four literate centers of the early ancient world, complete with long texts written on perishable materials. We demonstrate the impossibility of the lost-manuscript thesis and show that Indus symbols were not even evolving in linguistic directions after at least 600 years of use. Suggestions as to how Indus symbols were used are noted in nonlinguistic symbol systems in the Near East that served key religious, political, and social functions without encoding speech or serving as formal memory aids. Evidence is reviewed that the Harappans' lack of a true script may have been tied to the role played by their symbols in controlling large multilinguistic populations; parallels are drawn to the later resistance of Brahmin elites to the literate encoding of Vedic sources and to similar phenomena in esoteric traditions outside South Asia (Abstract, p. 19)." While a nonlinguistic interpretation of Indus symbols is a distinct possibility that needs to be taken into account, the initial reactions to the above proposal from scholars do not seem to indicate a wide acceptance. In any case, whether because the available attempts to decipher the linguistic value of Indus symbols have all failed to reach a convincing result, or because they are intrinsically nonlinguistic symbols, so far the symbols of Indus do not directly contribute to our linguistic understanding of history, which must be teased out only from an intensive mining of

linguistic sources such as the Vedic and Iranian texts, and this brings us back to the work of scholars like Emeneau, Burrow, Kuiper, Mayrhofer, Southworth, Witzel, Parpola, and Lubotsky, among others. The substratum languages in the area covered by the Indus Valley Civilization probably include Dravidian, (Para-) Munda, as well as ancestors of linguistic isolates like Burushaski, plus some traces of the languages of the Bactria Margiana Archaeological Complex, as well as early forms of Iranian and Indo-Aryan in the border areas. Southworth (2005: 328-9) says: "The Indus language (group) is probably the oldest detectable linguistic stage, both in Panjab and Sindh. An unidentified western Austro-Asiatic language designated as Para-Munda probably functioned as a *lingua franca* of this area. Both of these language groups may have been present as early as the seventh or eighth millennium BC, when archaeologists record the beginnings of agriculture in areas bordering the Indus Valley. Indo-Aryan appears in the form of Vedic Sanskrit, dateable to the early second millennium BC, probably preceded by outer Indo-Aryan. The arrival of Dravidian-speaking people in the area is difficult to date and is the subject of some controversy. Evidence of Dravidian borrowings in the Rigveda dates only from about 1200 BC, according to some sources, yet it is nevertheless possible that Dravidian languages were spoken in Sindh and Saurashtra (and perhaps even in Panjab) considerably earlier. Ultimately, only Indo-Aryan survives in these areas, though Sindh shows traces of outer Indo-Aryan." Also noteworthy are Witzel's two 1999 articles "Substratum Languages in Old Indo-Aryan" and "Early Sources for South Asian Substrate Languages," as well as the forthcoming article "The Languages of Harappa."

New Linguistic Approach in Mid-20th Century: "India as a Linguistic Area"

The most significant development of the middle of the twentieth century linguistic study of India was the idea of "India as a Linguistic Area" seen in the early works of Murray B. Emeneau and F.B.J. Kuiper, and eventually consolidated in the work of Nicholas Masica. Until the emergence of the notion of Linguistic Area, the only dominant model was the genetic model used in Indo-European and other forms of historical linguistics. The genetic model explains the common elements between genetically related languages as being a reflection of common ancestry. Where the genetically related languages differ, those differences may have developed either internally in those branches, or they may be due to contact with other languages of different regions etc. But what about a demonstrably large number of common features shared by languages that evidently do not belong to the same language family? Where do these features and their commonality originate? The new direction proposed by areal linguistics was that diffusion of linguistic features across genetically unrelated languages can occur through intense and prolonged contact. Given sufficient intensity of contact and depth of time, genetically unrelated languages of a given geographical region begin to exchange phonetic, syntactic, and other features with each other, and over time develop a significant set of such shared features. The research work of Emeneau, Kuiper, Masica and others has demonstrated how this process occurred in the Indian subcontinent so that languages belonging to different families like Indo-Aryan, Dravidian, and Austro-Asiatic came to share a large number of common linguistic features through diffusion, rather than common ancestry. Thus, genetic relationships between languages as well as processes of diffusion among languages of a given linguistic area are all working simultaneously to produce

the resulting state of a language or languages, and these different strands in the make-up of languages need to be analytically separated in order to get a proper sense of linguistic history. Franklin Southworth (1974) had previously used the term "linguistic stratigraphy" for this sort of linguistic analysis, and his recently published book (2005) calls it "linguistic archaeology," where he discusses how one can begin to peel off or dig into various layers of features acquired by a language or languages.

By the beginning of the second half of the twentieth century, especially with the researches of scholars like Emeneau, Burrow, and Kuiper, who added serious consideration of Dravidian and Austro-Asiatic languages and their co-existence in the Indian subcontinent with languages of the Indo-Aryan branch of the Indo-European family, many issues were newly brought into a sharper focus. In his 1975 article "Substratum Influence on (Ṛg-Vedic) Sanskrit," Hans Hock conveniently summarizes the conclusions of this research (p. 76-78):

> As is well known, the South Asian subcontinent today constitutes one of the paradigm cases of linguistic convergence: Three major linguistic families of distinct origins (Dravidian, Indo-Aryan, and Munda), as well at least one language isolate (Burushaski) have merged into a sprachbund which further extends into the fringes of the neighboring Iranian and Tibeto-Burman language families. This sprachbund (= linguistic area) is characterized by an impressive array of shared features which are found throughout most or all of the individual sub-dialects of the area and which include a contrast between dental and retroflex segments [for example, *t*, *th*, *d*, *dh*, and *n*, versus *ṭ*, *ṭh*, *ḍ*, *ḍh*, and *ṇ*], a prevailing SOV (= Subject-Object-Verb) sentence structure, and the phenomenon of a 'cumulative'

extended sentence structure characterized by the tendency to limit the occurrence of finite verbs to the rightmost clause; while all preceding (non-relative) clauses have the verb appear as a non-finite 'absolutive.' Considering the massiveness of this present-day convergence, it is only natural to assume that it must be a result of centuries, if not of millennia, of quite intimate bilingual contact. And it is equally natural to speculate on the period when the developments leading to his convergence must have begun. In terms of the history of Indo-Aryan, did they begin at the time of the earliest extant texts, the Vedic Samhitās, especially the oldest among them, the *Ṛg-Veda*? Or did they take their course only in a later, post-Vedic period?

It is natural to speculate on the direction of the convergence in its early stages. Was it a mutual convergence, as it is usually encountered in present-day India? Or was it mainly a unidirectional convergence comparable, say, to that between Czech and German?

... As early as 1833, Pott considered the dental/retroflex contrast of Sanskrit at least partly due to the influence of the 'autochthonous' languages (78), later specifying these as Dravidian (1836: 19, 453). In 1856, Caldwell made similar claims (38). As time progressed, the number of linguists subscribing to this view and adding other features of (Ṛg)Vedic or post-Vedic Sanskrit considered the result of Dravidian influence steadily increased.

In 1921, Przyluski added another possible source for some of these phenomena, namely Munda. Levi (1923) added further weight to the assumption that Munda at one time must have been very influential in the South Asian area. As a consequence, it was for some

time considered possible that Munda, as well Dravidian, may have contributed to the specifically "Indian" features of Sanskrit (such as the dental/retroflex contrast); cf. e.g. Bloch (1934: 53-4). As a matter of fact, Pizagalli (1929: 165-7) believed that only the Munda languages could be the source for Indo-Aryan retroflexion. In the more recent literature, however, the influence of Munda is considered to have been minimal at best, Dravidian being cited as the only probable source language; cf. e.g. Emeneau (1956, 1962a, 1974), Kuiper (1967a).

There is thus a long tradition of explicitly or implicitly answering the question concerning the beginning of the South Asian convergence to have been pre-Vedic (since the dental/retroflex contrast occurs already in the earliest, Ṛg-Vedic texts). Moreover, at least for the early, Vedic period, there is a tacit agreement that the convergence was unidirectional, from Dravidian (or Munda) to Sanskrit. At any rate, except perhaps for the area of vocabulary, no attempt seems to have been made to identify any instances of early convergence in the opposite direction.

This view, however, has not remained unchallenged. There has been a small, but constant flow of linguistic opinion according to which, especially in view of our present ignorance about the full linguistic panorama of early India, it is hazardous to attribute convergence only to a Dravidian (and/or Munda) substratum: There may have been other languages which could have been the source for at least some of the phenomena, cf. e.g. Bloch (1929: 731-2, 1934: 322-4), Mayrhofer (1953: 233-4), Thieme (1955: 436-48). In light of the fact that even today we find the isolated Burushaski in the South Asian sprachbund, this

cautionary attitude seems to be justified.

Some linguists even have completely rejected the hypotheses advocating early substratum influence, and have claimed that the developments in question can be accounted for as native, without any need for assuming an out-side, non-Indo-Aryan substratum; cf. e.g. Bühler (1864), Bloch (1925: 16, 29).

Finally, other linguists, accepting the view that (some of) the phenomena in question can be accounted for as regular, native developments, proposed that at most, the substratum language(s) accelerated or 'helped' these developments; cf. e.g. Konow (1903: 455, 1906: 279), Bloch (1929: 723-4, 1934: 53-4) (thus changing his earlier, 1925 view), Burrow (1955: 95-6).

I have quoted Hock's account at length to illustrate the complicated history of these arguments and to show approximately where these arguments stood in 1975. For an updated review of this discussion, see Hock (1996). The discussion makes it clear that there is no scholar at this time seriously arguing for the indigenous Indian origin of Aryans or Indo-Aryans whose views need to be included in such a survey of linguistic scholarship. Secondly, there is greater awareness of the increasing complexity of linguistic arguments as one begins to take into account questions of language contact, bilingualism, convergence, diffusion of linguistic features, formation of sprachbund or linguistic area, etc. Besides the question of the origin of retroflex consonants in Indo-Aryan as possibly due to language contact and convergence with Dravidian and/or Munda languages, Hock (1975) also discusses other features possibly due to diffusion:

Vocabulary items: For example, *mīna* 'fish,' *ulūkhala* 'mortar,' *mayūra* 'peacock' from Dravidian, and words like *lāṅgala* 'plough' from Munda.

Absolutives: Constructions of the type *kuṇḍaṃ kṛtvā devadatto 'pibat* 'having made the pitcher, D. drank'. Such constructions are generally considered the result of Dravidian influence.

Participles as finite verbs: This indicates the increasing use of constructions like *devadattena kuṇḍaṃ kṛtaṃ*, besides the finite verb construction *devadattaḥ kuṇḍam akarot*. This is earlier attributed to Dravidian influence.

Nominal Style: The nominal sentences in Sanskrit as well as the tendency of the increasing length of the nominal compounds has been attributed to Dravidian substratum in earlier discussions.

SOV sentence order: The subject-object-verb order of Sanskrit, in contrast with the western Indo-European languages, is explained on the assumption of Dravidian substratum.

Quotative *iti*: The tendency of Sanskrit to signal the direct discourse by postposing the particle *iti* has been attributed to Dravidian substratum.

Āmreḍita compounds: The repetitive use of words in the sense of "every x" in passages like *svaṃ svaṃ caritraṃ śikṣeran* has been claimed to be a result of substratum influence.

Use of *api* : The various uses of *api* have been claimed as a result of Dravidian substratum influence.

Caste terminology and usage: Emeneau (1974) claims that the pattern of making derived feminines from masculine caste names like *kumbhakārī* from *kumbhakāra* 'potter' is due to Dravidian substratum.

One should note that the listing given above is simply to indicate the kinds of arguments that were proposed by various scholars by this time and not to suggest that there was a complete consensus among scholars on all or any of these proposals. Around this time, in fact, one notices more

proposals from Emeneau and Burrow regarding Dravidian substratum influence, from Kuiper regarding Munda influence, and scholars like Thieme indicating their doubts about many of these proposals for Non-IE sources of influence and counter-suggestions for internal development of many features within specific branches of Indo-European, without the necessary assumption of external influences. Hans Hock himself, after a detailed examination of evidence in his 1975 and other publications, expresses a more cautious approach to suggestions of substratum influence: "Perhaps the most important argument against a Dravidian origin of features in question, especially in Ṛg-Vedic times, is the fact that there is not only no conclusive, independent evidence for early Dravidian/Indo-Aryan contact, but that on the contrary there is independent evidence for early contact between Indo-Aryan and another non-IE-language (which is generally considered not to be a likely source for these features), namely Munda. This casts considerable doubt on the common assumption of early Dravidian/Indo-Aryan contact and the convergence it is generally assumed to have entailed. ... Finally, it is by no means certain whether Proto-Dravidian did in fact, as is generally assumed (at least implicitly), antedate the arrival of the Indo-Aryans. While it is thus unlikely that there was early convergence of Indo-Aryan with Dravidian, this should not be understood to imply that there proof against such a convergence", Hock (1975: 113-4).

Migrations, Language Contact, Bilingualism, and Dialect Geography

Assuming the mainstream view of Indo-European linguistic theory, several problems concern us regarding the probable migrations of Aryans and about the identity of the non-Aryans they most likely met in India and before reaching India proper. Hoernle (1880: xxx-xxxii) postulated the existence

of two early Aryan groups in North India, the Magadhan and the Sauraseni, representing two waves of Indo-European language speakers, of which the Magadhans were the older. This idea was supported by Grierson (*Imperial Gazetteer of India*, Vol. 1, pp. 353-59) and given an ethnological footing by Risley (1915: 55). Oldenberg also supported and elaborated this idea and pointed out that "probably the first immigrants, and, therefore, the farthest forward to the east ... are those tribes ... the Aṅga and Magadha, the Videha, the Kosala and Kasi." He (1890, 1882: 9) also claims that it was the second wave that produced the Vedas. This theme has been linguistically upheld by Meillet who shows that the Vedic dialect, like the Iranian, is an *r*-only dialect in which the Indo-European **l* merged into *r*, but the dialect of the redactors of the Vedas was an *r*-and-*l* dialect, where the original Indo-European **r* and **l* were retained; the redactors of the Vedic texts have put this *l* back into some of the Vedic words, where the original Vedic dialect had an *r*, Meillet (1912-13); Bloch (1970: 2). In later Prakrits we clearly see the eastern Prakrit, Magadhi, developing into a pure *l*-only dialect; whereas the western and particularly the northwestern dialects, almost devoid of *l*, represent the early *r*-only dialect, (Mehendale 1948: 297). For more recent studies of Vedic dialects and possibility of multiple migrations of Indo-Aryans speaking slightly varying dialects, see: Parpola (1988) and (2002), and Witzel (1989).

We should explore the difference between the *r*-only dialect, the *r*-and-*l* dialect (and possibly an *l*-only dialect) further. Burrow (1972) provides a perceptive analysis of this issue. He (1972: 535) says that "the *r*-dialect prominent in the early Ṛgveda shares a common change (of *s* > *ś*) with Iranian. It is unlikely to have undergone this change independently and consequently we must assume that it took place when a group of Indo-Aryan migrants were still in

contact with Iranians. ... On the other hand, those Indo-Aryans who preserved the distinction between *r* and *l* had already departed to India, and so they were unaffected by it. The speakers of the *r*-dialect were the latest comers on the Indian scene and there ensued a mixture of the two dialects." This is an important proposal. This suggests that there was a branch of Indo-European, which like the parent Indo-European had retained the distinction between *r* and *l*, and that this branch came into the region of Iran and later into India before the migrations of the standard Indo-Iranian branch.

Burrow's 1973 article titled "The Proto-Indoaryans" allows a further refinement of his ideas. In this study, Burrow proposes that there was a common Indo-Iranian homeland of the Proto-Aryans in northern Iran. He suggests that ancestors of Iranians and Indo-Aryans lived together in this common homeland. Then at first there was a southward migration of the ancestors of the Indo-Aryans, or Proto-Indo-Aryans. The Proto-Indo-Aryans spread both eastward to India and westward toward the Near East. Then came the second southward migration, that of the Proto-Iranians. The migration of the Proto-Iranians split the Proto-Indo-Aryans from their Western branch, those who are eventually represented in the Mitanni documents. In this scenario, all the three groups, the Proto-Iranians, the Western branch of the Proto-Indo-Aryans, and the Eastern branch of the Proto-Indo-Aryans represent the *r*-only dialects of common Indo-Iranian heritage. The Eastern branch is represented in the Ṛgvedic Aryans. The Western branch of the Proto-Indo-Aryans represented in the Mitanni documents is also an r-only dialect. This is clear from the following examples cited by Burrow (1973: 123) and Parpola (1988: 196):

Epithets of horses

Mitanni	Vedic
papru-nnu or *babru-nnu*	*babhru-* 'brown'
pinkara-nnu or *binkara-nnu*	*piṅgala-* 'reddish brown'
paritta-nnu or *baritta-nnu*	*palita-* 'gray'

In these examples, the Mitanni-Aryan dialect has *r* even where the Vedic words have an *l*. How about the *r*-and-*l* branch of Indo-European which presumably reached India before the Ṛgvedic Aryans? Where did they come from? Did they reach India via Iran? If so, did they leave any trace of themselves in Iran? Were the speakers of the *r*-and-*l* dialect of Pre-Vedic Indo-Aryans a totally different branch from the Indo-Iranian? These are difficult questions. Parpola (1988: 247) suggests: "The change *l* > *r*, which characterizes the common protolanguage of the Ṛgvedic and Avestan, seems to have taken place relatively late in Proto-North-Aryan, since it has not reached peripheral dialects, including Ossetic and a number of Pamir dialects within East Iranian. Several etyma suggest that Proto-Nuristani retained the original PIE *l*; others attesting to the change *l* > *r* are probably early loan words from Proto-Dardic (i.e. Proto-Ṛgvedic). The nearly 1,900 Iranian proper names in the Persepolis tablets contain possible traces of an *l*-retaining dialect in western Iran in the early fifth century B.C." Anyway, one still would have to assume the entry of the *r*-and-*l* dialects of Indo-Aryans into India before the arrival of the Ṛgvedic Aryans to account for the fact that *r*-and-*l* dialects in India were more easterly in relation to the Ṛgvedic dialect.

This poses many complicated problems in our understanding of the contact and/or convergence of Aryans with non-Aryans in different parts of India, and outside of India. One thing seems to be clear. The contacts with non-Aryans outside of India did not lead to retroflexion either in

the Indo-Iranian dialects, or in the pre-Indo-Iranian (*r*-and-*l*) dialects. The retroflexing influence was manifest in India. Even here it is manifest more in the eastern parts of north India than in the northwestern parts. Is it because there was less intense contact and/or converegence in the northwest? Or, is it because the non-Aryans in the northwest did not have retroflexion in their speech?

We may also refer to the problem of the origin of the retroflex sounds ḷ and *ḷh* for intervocalic *ḍ* and *ḍh* in Śākalya's recension of the *Ṛgveda*, the only recension that has survived to the present day. We hear of other recensions of the *Ṛgveda* such as those of the Māṇḍūkeya, Śāṅkhāyana, and Bāṣkala schools, but they are now extinct. Most scholars take for granted the existence of these sounds in the *Ṛgveda*. I disagree with this view. I think that like other eastern retroflexes, *ḷ* developed when the Ṛgvedic recitational traditions moved eastward in North India. Evidence to support this possibility comes from inscriptional Prakrits. Mehendale (1948: 11) points out that, in inscriptional Prakrits, the "change *-ḍ-* > *-ḷ-* occurs in the non-Western groups," illustrated by the regional alternation of *eḍaka* and *eḷaka*. This shows that the change of *-ḍ-* to *-ḷ-* did not occur in the northwestern regions of India at the time of Aśoka. Pāṇini, who comes from the northwest and precedes Aśoka by about two centuries, does not have the sound *ḷ* in his Sanskrit. His rules concerning the Vedic language do not have any indication of the existence of the sound *ḷ* in the Vedic texts known to him. In fact, in his rules like P.6.3.113 (*sāḍhye sāḍhvā sāḍheti nigame*) and P.8.3.54 (*iḍāya vā*), he refers to Vedic usages such as *sāḍha* and *iḍā* without *ḷh* and *ḷ* for the intervocalic *ḍh* and *ḍ*. Pāṇini obviously knew Śākalya's Ṛgveda, and hence it is surprising to find him not recording the existence of *ḷ* in that text. Thus, even though we reconstruct these retroflex *ḷ* sounds in Proto-Dravidian, this sound does not manifest first in the

northwestern Indo-Aryan. This indicates that even if we assume the Indus-Valley speakers to be Dravidians of some sort and that a contact and/or convergence with them occurred in the northwest, it does not seem to have led to massive retroflexion in that region. The massive retroflexion appears in the central and eastern parts of north India, and then in the South.

We cannot deny that the incoming Aryans came in contact with certain non-Aryan people in India. There is ample evidence for such contacts. Emeneau (1974: 93) not only proposes that there was "extensive bilingualism," but that "Sanskrit was handed down at some early period by a majority of speakers who learned it as a second language, their first language being Dravidian. "However, it is impossible to believe that majority of the composers of the *Rgveda* had Sanskrit as their second language and had some Dravidian language as their first language. This does not contradict the existence of several words in the *Rgveda* which can only be explained as loan words from Dravi- dian and Munda languages. The loan words do indicate contact with non-Aryan peoples. However, even if one accepts the entire lists of Rgvedic loan words provided by Kuiper, Burrow, and Southworth, the total number of these words in the *Rgveda* is still not as great as the number of Indo-Aryan loan words in Tamil or in Southeast Asian languages. Neither the Southeast Asian languages nor the British English pick up retroflexion, in spite of borrowing a very large number of words from retroflexed languages.

Ananthanarayana (1970: 66) basically accepts the concept of bilingualism as proposed by Emeneau and Kuiper, but derives a slightly different conclusion: "It is suggested that in the first period of this contact bilinguals were recruited chiefly from the native population. Support for such an assumption is provided in the greater number of Sanskrit

loans (in Dravidian languages) as opposed to an insignificantly small number of Dravidian words in Sanskrit." This would mean that more Dravidians accepted Aryan words than Aryans accepted Dravidian words. This also suggests that the initiative for adoption was more prominent on the part of the native non-Aryan than on the part of the incoming Aryan. Thus, to account for retroflexion in Indo-Aryan, it is necessary to assume that a large number of speakers of Indo-Aryan were native Dravidians, rather than Aryans influenced by Dravidians as assumed by Kuiper (1967). Kuiper himself (1958: 351) says that foreign words were "Sanskritized" in the process of being incorporated into Sanskrit: "Sanskritization of foreign words by substitution of *tr*, *dr* (or *rt*, *rd*) for *ṭ*, *ḍ* is well attested in the classical language." He (1958: 352) carries this tendency farther back into the Ṛgveda: "The explanation of *kartá-* as a Sanskritization of *kāṭá-* would seem to be rather the only one that is phonetically admissible according to our present knowledge." If one accepts Kuiper's explanation of *kartá-* < *kāṭa-*, which is by no means certain, it would appear that the Ṛgvedic Aryans did think of *rt* as being more native to the Aryan tongue, and *ṭ* as being somewhat foreign.

Emeneau did recognize this problem. Instead of saying that Aryans interpreted allophones of Proto-Indo-Aryan in terms of the foreign Dravidian phonemic system, he considered it more logical to assume that Dravidians interpreted allophones of Proto-Indo-Aryan in terms of their native phonemic system in the process of adopting the foreign Aryan language. In his excellent paper "Bilingualism and Structural Borrowing," as early as 1962, Emeneau (1962a: 434) points out that "the evident Dravidianization of Sanskrit in some of its structural features must lead to the partial conclusion that a sufficient number or proportion of certain generations of Sanskrit speakers learned their Sanskrit from

persons whose Dravidian linguistic traits were translated into Indo-Aryan and who provided the model for succeeding generations."

In his 1962 article, Emeneau proposed an essentially correct sociolinguistic process for the development of retroflexion in Sanskrit, but he was not sure of the exact chronology or of the intensity of this process with reference to the early Vedic texts. Were Dravidians participating in a significant proportion in the use of Sanskrit in pre-Vedic times? In 1962 Emeneau (1962a: 434) was not sure. In 1974, making essentially the same sociolinguistic argument, Emeneau (1974: 92) claims more confidently that such a process must have taken place before the composition of the *Ṛgveda*, and agrees with Kuiper that retroflexion in the existing Ṛgveda is an indication of pre-Ṛgvedic Dravidianization of the Aryan language.

In order to be able to evaluate the arguments put forward by Emeneau and Kuiper to establish "bilingualism" between the Vedic Aryans and Dravidians, we must take into account the analysis of bilingualism by Nadkarni (1975: 681), who points out that "structural borrowing at all levels of language, including syntax (the so-called 'deepest' level), can take place irrespective of the factor of social prestige, but solely as a consequence of 'intensive and extensive' bilingualism with a certain time-depth.... By 'extensive' bilingualism, I mean a situation in which bilingualism is coextensive with the entire community, as in the case of K[annad] S[arasvat] K[onkani] speakers. By 'intensive' bilingualism, I mean a situation in which a community whose mother tongue is language A is not merely conversant with language B, but actually uses it for a wide range of purposes in the course of normal, everyday living. Extensive bilingualism, in particular, seems necessary for structural borrowing to be stabilized, since it renders all the members of the community more or less equally receptive

to influences and traits of the non-native language—which, first randomly, and gradually more and more regularly, find their way into their mother tongue. A linguistic innovation has a strong chance of stabilizing itself in a language if it attracts no notice, and therefore no resistance from speakers, particularly in the early stages. This is possible only in situations of extensive bilingualism." Kuiper's data, as well as the loan word data pointed out by Southworth, indicate "sporadic" bilingualism, but are insufficient to indicate extensive or intensive bilingualism as defined by Nadkarni. I am pleased to report that Emeneau (1981: 469) agreed with my suggestion that retroflexion in the existing recension of the *Ṛgveda* needs to be explained more in terms of an increasingly Dravidianized oral transmission of the text, rather than in terms of this trait being part of the language of the original composers.

More Recent Developments: Emergence of "Out-of-India" Arguments

This is approximately where the linguistic debates stood by the end of the 1970s and 1980s. There was hardly an indigenous Aryan argument from linguistic angle to be seen in the available literature. The papers presented at the 1976 conference held in Ann Arbor, Michigan, on the theme "Aryan and Non-Aryan in India" (published in 1979) explore various linguistic questions such as "Aryan and Non-Aryan Elements in North Indian Agriculture" (Masica), "Linguistic Prehistory: The Dravidian Situation" (McAlpin), "Lexical Evidence for Early Contacts between Indo-Aryan and Dravidian" (Southworth), and "Genesis of Ṛgvedic Retroflexion: A Historical and Sociolinguistic Investigation" (Deshpande). While each of these studies explores various dimensions of the interaction between Aryan and Dravidian language groups, they do not question the basic tenets of

Indo-European philology, and the need for the assumption of the migration of the Indo-Aryan branch into the Indian subcontinent. The "alternative" view of Indian origins of Aryans is more or less absent at this time.

The situation seems to have changed by the beginning of the 1990s. George Erdosy had organized a conference in October 1991 in Toronto on the topic of "Archaeological and Linguistic Approaches to Ethnicity in Ancient South Asia" (papers published in 1995 under the title: *The Indo-Aryans of Ancient South Asia: Language, Material Culture and Ethnicity*, ed. by Erdosy). Papers at this conference indicated an emerging divide between some archaeologists (cf. Shaffer and Lichtenstein) who stressed the purely indigenous development of South Asian civilization and downplayed the role of linguistic arguments, and linguists and philologists like Deshpande, Southworth, and Witzel who argued that the linguistic arguments for separate language families arriving and converging in South Asia need to be understood in better ways, than be discounted. Deshpande argued for the careful separation of ethnic, linguistic and cultural groups and deplored their loose identification with archaeological assemblages. Witzel stressed that images of mass migration may have originated in the 19th century, but exist today principally in the minds of archaeologists and polemicists. He pointed out the outmoded models of language change, as well as overreactions to them (by denying the validity of ANY migrational model) by both archaeologists and Hindu nationalist writers, who continue to uncritically use the late Epic and Puranic materials to refute the linguistic arguments dealing with a far more ancient period.

Interestingly, during the same year, July 1991, a seminar on the "Aryan Problem" was organized at Bangalore by the Mythic Society of Bangalore and the Bharatiya Itihasa Sankalana Samiti of Pune, and the papers delivered at this

seminar were published from Pune in 1993 by S.B. Deo and Suryanath Kamath. This volume presents a complete contrast with the previously mentioned volume of papers from the 1991 Toronto conference. The majority opinion in the Bangalore conference volume is in the direction of completely rejecting the Aryan migration theory. Many of these papers appropriately point out the colonial motivations of many founding fathers of Indo-European philology. However, they fail to recognize that the Indo-European theory also went counter to many deeply held religious doctrines of Christianity and traditional European notions of ethnic identity, and became a catalyst in a transformation of European study of language and religion, and that on purely objective linguistic grounds much of the edifice of Indo-European linguistics is still standing undamaged and unrefuted. Mehendale's paper in this volume, "The Indo-Aryans, the Indo-Iranians and the Indo-Europeans," is the only paper that exhibits a strong academic foundation and gives a detailed summary of linguistic arguments describing these phases of Indo-European migrations, but the same cannot be said of other papers in this volume. While many papers (e.g. Waradpande and Wakankar) in the volume spare no effort to reject Indo-European linguistics and notions of migrations into India, there is no objective historical basis offered for the claims of Sanskrit being the mother of not only Indo-Aryan, but all Indo-European, and indeed of all languages. For example, consider the following paragraph from Waradpande's article ("Fact and Fiction about the Aryans," p. 19): "The disapproval of Śiśnadevas in two verses is not disapproval of phallus-worship, but of the practice of playing with the penis, as explained by Sāyaṇa. Linguistically also, a phallus-worshipper would be called Liṅgapūjaka and not Liṅgadeva. The Liṅgapūjaka is never called Liṅgadeva." A few minutes spent with the Vedic Word Indices published

by Vishvabandhu would show that the sole form *pūjita* from the root *pūj* occurs for the first time only in the Khilas of the *Ṛgveda*, and in no other Samhitā text, and similarly the form *liṅga* is completely absent in the Vedic Samhitās. Such is the historical integrity of Waradpande's arguments.

"The Aryan Problem: A Linguistic Approach" by R.P. Arya rejects any possibility of Indo-Europeans colonizing India, but asserts: "This forms a strong *prima facie* evidence enough to dispel the suppositions of modern philologists that identify Sanskrit as contemporary to her alleged sister languages of Indo-European family and accord her a high antiquity to be termed as the oldest known language of the world that formed or lent the idiom at least, to all the Indo-European languages that belonged either to the Semites or the Aryans. It seems that when the most exalted and advanced Vedic language had taken shape in India, the Semitics in Europe and rest of Asia were in a process of forming their language. And it seems more likely that the half-formed idiom of their language reached its completion at the hands of the Aryans who left their homeland several times to colonise the alien lands. ... The Indian sacred books contain accounts of many emigrations from India in all directions" (p. 54). Any elementary textbook of linguistics would clarify that "Aryan" and "Semitic" are two unrelated language families. Such arguments are a clear throw-back to the nationalist linguistics of N.B. Pavgee at the beginning of the 20th century.

The names of Satya Swarup Misra, Madhusudan Mishra, N.S. Rajaram and Shrikant Talgeri are absent from the list of participants in the 1991 Bangalore conference on the "Aryan Problem," and yet the next decade in India comes to be dominated by the appearance of these writers of the indigenist Aryan school. To this list one should also add the writings of Subhash Kak. Subhash Kak in his 1994 article "On the Classification of Indic Languages" concludes with these

words: "The structural relationships amongst the Indo-European family of languages are well known. Not equally well known are the structural connections between the Indo-Aryan, the Dravidian and the Munda languages. These languages may be said to belong to the Prakrit family of languages. We use the label 'Prakrit' since it has been traditionally used to describe all Indian languages. In other words we argue that in general one might speak of membership of a language of more than one family. We believe that such a usage is more accurate than the term 'linguistic area' used earlier by Emeneau (p. 193)." Kak misses the significant difference between the opposite historical processes involved in the concepts of a "language family" and "linguistic area." The notion of a language family implies that languages B and C are branchings of a common ancestor A, and this fact of a genetic connection accounts for certain shared features. On the other hand, the notion of a linguistic area implies that languages A and B, though belonging to different language families and originally possessing different linguistic features come to share some of each others features over a long period of time through intense contact. Thus, shared common features of languages are a result of at least these two rather distinct processes. But then Kak asserts: "The evolution of the Prakrit family over millenia through prolonged interaction of the populations explains structural as well as biological commonality. The attested migrations of the Indo-Iranians into Europe explains the presence of several Dravidian features in the European languages (p. 193)." The project here appears more like building a primordial language family out of historically unrelated and yet closely interacting linguistic groups, analogous to concepts like nation-building in countries like India. "Linguistic Area" becomes "Family" for Kak.

By the time I organized the second conference on the

theme of "Aryan and non-Aryan in South Asia: Evidence, Interpretation and Ideology" in Ann Arbor, Michigan in October 1996 (the proceedings published in 1999), the presence of the indigenist Aryan school or the Out-of-India theory in the literature was loud enough to be taken into account. In the preface, the editors of the conference volume, Deshpande and Bronkhorst, say: "The Orientalist scholarship of the last two centuries has given new and various constructions to the received Aryan/non-Aryan distinction(s), constructions which have linguistic, racial, historical or even art-historical referents. Recently there have been reconsiderations and reinterpretations of the terms within and outside the academy. There is on the one hand the established view of a migration of Aryans into South Asia: on the other hand there are new voices calling the whole endeavor fanciful, motivated by colonialism, 'Orientalism,' nationalism, or something else. ... In South Asia the terms have also played a significant role in the recent growth of a politics of religious nationalism, and the reconstructions of South Asian history that goes with it. ... The time is past when it can be treated as a substantive question as to the 'facts' in isolation from historical and political overtones (p. i)."

In his article "Out of India? The linguistic evidence" in this conference volume, Hans H. Hock deals at length with the "Sanskrit origin" hypothesis of S.S. Misra. In the introduction of his article, Hock states that "the claim that the āryas are indigenous to India can therefore be reconciled with the relationship of Indo-Aryan to the rest of Indo-European only under one of two hypotheses: Either the other Indo-European languages are descended from the earliest Indo-Aryan, identical or at least close to Vedic Sanskrit, or Proto-Indo-European (PIE), the ancestor of all the Indo-European languages, was spoken in India and (the speakers of) all the Indo-European languages other than Sanskrit/

Indo-Aryan migrated out of India, Hock (1999: 1)." Hock calls the first of these the "Sanskrit origin" hypothesis and points out that it has been advocated by Satya Swarup Misra (Misra 1992). Misra attempts to demonstrate that Vedic Sanskrit is identical to Proto-Indo-European and that late 19th century arguments to the contrary are mistaken and biased against Sanskrit. Hock's detailed examination of Misra's arguments cannot be reproduced here, but Hock shows how Misra's interpretation does not agree with well-established principles and practices of comparative reconstruction. Hock also points out why given the geographical distribution of the Indo-European languages it is not possible to consider India to be the home of Proto-Indo-European, and concludes: "Niether the Sanskrit-origin variant nor the PIE-in-India variant, thus, turns out to provide credible support for the 'Out-of-India' hypothesis. Rather, the linguistic evidence still favors the prevailing Indo-Europeanist perspective that the speakers of Indo-Aryan migrated into India, Hock (1999: 17)." Hock's detailed arguments have provoked further indigenist responses by scholars like Koenraad Elst and others, but I have yet to see a convincing linguistic case made to support the indigenist 'Out-of-India' position.

In his important article "Linguistic substrata and the indigenous Aryan debate" in the same volume, Edwin Bryant (1999) has provided a comprehensive review of the linguistic arguments (later expanded into his 2001 book: *The Quest for the Origins of Vedic Culture: The Indo-Aryan Migration Debate*) and he concludes: "In short, all these linguists are operating on the assumption, based primarily on *other* criteria, that the Aryans 'must have' invaded India where there could not have been a 'linguistic vacuum'. Since Dravidian and Munda inadequately explain the changes visible in Sanskrit, many are forced to consider theories of extinct languages. How

the data could be convincingly reinterpreted if this assumption were to be reconsidered remains to be seen, since a comprehensive and objective case has yet to be made by the 'Indigenous Aryanists' despite their possessing the rudiments of a variety of alternative explanations already advanced by Western linguists in their disagreements amongst themselves. The hypothesis of a pre-Indo-Aryan linguistic substratum remains perfectly acceptable way of explaining the existence of the non-Indo-European features in Sanskrit. ... In conclusion, in my opinion, the theory of Indo-Aryan migrations into the Indian subcontinent must be primarily established without doubt *on other grounds* to be fully conclusive. The apparent 'evidence' of a linguistic substratum in Indo-Aryan, in and of itself, cannot be used as a decisive arbitrator in the debate over Indo-Aryan origins (Bryant 1999: 80)."

Bryant's 2001 book is the most comprehensive review of the Indo-Aryan migration debate that gives for the first time a fair hearing to the Out-of-India voices. After giving a fair hearing to both sides in the debate, expressing his personal opinion of the controversy between the indigenist Aryan view and the standard Aryan migrationist view, Bryant remarks: "On a personal note, I am accordingly sympathetic to the Indigenous Aryan 'school' (if, simply for ease of reference, I might be permitted to reify my motley group as a school) when I view it as a manifestation of a postcolonial rejection of European intellectual hegemony (since most of the voices are from India), especially my analysis has led me to realize exactly how malleable much of the evidence actually is. This does not mean that the Indigenous Aryan position is historically probable. The available evidence by no means denies the normative view—that of external Aryan origins and, if anything, favors it. But this view has had more than its fair share of airing over the last two centuries, and the

Indigenous Aryan position has been generally ignored or marginalized. What it does mean, in my view, is that Indigenous Aryanism must be allowed a legitimate and even valuable place in discussions of Indo-Aryan origins" (Bryant 2001, Introduction, p. 7). While one appreciates the service that Bryant (2001) and Bryant and Patton (2005) have done to the field by fairly reporting and bringing to full exposure arguments of the Indigenous Aryan school, their endeavor to offer level playing field to these arguments is occasionally liable to be misunderstood to imply that there is balanced and convincing scholarship in these writings. Such is not the case and the Indigenist Aryan school, even as one sympathizes with its venting of grievances against the colonial background of much of the earlier IE scholarship, has yet to develop a convincing linguistic argument. A fair selection of recent Out-of-India theory oriented articles can be found in Bryant-Patton (2005), besides some very important articles that indicate newer directions in our understanding of the Indo-Europeanist theory of Aryan migrations.

Promising New Directions in Linguistic Research

During the last five years, a high volume of exciting linguistic research has appeared that seems to indicate the likely path taken by the Indo-Iranians from areas to the north of the Central Asian region, through that region, and finally into the areas of Iran, Afghanistan, and India. This research points to a period where Uralic (Finno-Ugrian) speakers were in contact with Proto-Indo-Iranians to the north of the Bactria-Margiana region of Central Asia. Then several researchers uncover the linguistic interaction of the Proto-Indo-Iranians while they lived and gradually migrated southward through the Bactria-Margiana area in the direction of Iran and India. Much of this research combines linguistic and archaeological insights. This new research clarifies the path taken by the

Indo-Iranian branch from the northern Taiga belt through the Central Asian regions finally reaching Iran and India. Among this research I would count a number of papers by various scholars included in the volumes *Early Contacts between Uralic and Indo-European: Linguistic and Archaeological Considerations* (Helsinki 2001) and *Indo-Iranian Languages and Peoples* (2002, edited by Nicholas Sims-Williams). Very important are the articles in the first volume by E.E. Kuz'mina on "Contacts between Finno-Ugric and Indo-Iranian speakers in the light of archaeological, linguistic and mythological data" and by Alexander Lubotsky on "The Indo-Iranian Substratum." The second volume mentioned above contains important articles by J.P. Mallory on "Archaeological models and Asian Indo-Europeans" and by Asko Parpola on "From the dialects of Old Indo-Aryan to Proto-Indo-Aryan and Proto-Iranian." To this cutting edge work, I would like to add some illuminating recent articles by Michael Witzel on "Autochthonous Aryans? The Evidence from Old Indian and Iranian Texts" (2001) and "Linguistic Evidence for Cultural Exchange in Prehistoric Western Central Asia" (2003).

I would like to conclude this extensive survey of the history of the linguistic arguments by saying that historical linguistic research, like any other project of historical reconstruction, is always going to remain a work-in-progress. The linguistic arguments can provide only one indicator in reconstructing history of human populations. In recent years, there are extensive attempts to correlate linguistic data with archaeological data as well as with studies of the DNA structures. However, such correlations are fraught with serious problems. As Windfuhr (1997: 156) points out: "There is either common ground or agreement in many respects, including the recognition that genetic-linguistic relationships are not the same as ethnic or as biological

relations. ... It is also agreed, however, that linguistics and archaeology operate with different data within different epistemologies. ... Neither ceramic patterns nor reconstructed rituals or cultures, or their particular assembly, allow for the reconstruction of the language, or languages, that was part of them. Language disappears and can only be reconstructed; artifacts are remains. Language change is not synchronized with cultural change." The ferment in these interdisciplinary approaches to reconstructions of Indo-Europeans and their specific branches like Indo-Iranian is manifest in the recent publications of scholars like Lamberg-Karlovsky (2002) and responses to his work by other scholars like Kuz'mina and Mallory. Similar interactions are taking place between biological and other approaches to historical reconstruction, cf. Shereen Ratnagar (1998 and 1999), Kivisild (1999). What we can expect from the on-going research is an open-ended approach to continually seeking new methods, refining the old ones, and search for previously unknown data, but not an axiomatic commitment to predetermined conclusions.

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1. The term "retroflex" to those sounds like *ṭ* that require the tongue to curl back and touch the top of the oral cavity. In the pronunciation of *ṛ* and *ṣ*, the tongue curls back, but does nottouch the top of the oral cavity. This curling back of the tongue is not involved in the pronunciation of the dental sounds.

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Agro-pastoralism and the Migrations of the Indo-Iranians

Shereen Ratnagar

Of all extant language families, the Indo-European is known to have the greatest geographic dispersal. As stated in the previous Chapter, this dispersal emanated from the grasslands of Europe and Central Asia, or Eurasia. The Indo-Iranian languages represent one of the cleavages of this huge family, a branching out that resulted in the independent development of languages such as Avestan whose speakers went to Iran and Vedic Sanskrit (Indo-Aryan) whose speakers went to India. In the pre-modern world, languages did not spread across the world unless those who spoke them did; and this paper is an attempt to trace one factor in the dispersal. This factor is a socio-economic system known as agro-pastoralism, which is a system more complex than a simple combination of pastoral and agricultural land use.

What we know about the people who spoke and introduced Vedic Sanskrit in India comes primarily from the *Rg Veda*. Reading this text as a source of information on the early Aryan migrants and their religion is not an easy task. We need a perspective on the social circumstances in which

the Ṛgvedic verses were composed, and we shall begin with the *Ṛg Veda* as a text. Using some kinds of social information embedded in this ritual text, we shall then make a case for Ṛgvedic society as agro-pastoral. We shall then explore the "prehistory" of this society in the Indo-European homeland. For the long period 5000–2000 BC, there is much archaeological information, coming from dozens of sites scattered over the vast steppe region between the Ukraine and eastern Kazakhstan. We shall not attempt a literal match between archaeology and language history, as the archaeological record is always a small fraction of the total cultural practices of a people and we would not know what ethnic/linguistic markers to look for in order to give a linguistic label to this or that site. Instead, we shall be concerned with the responses of several groups of people to the living conditions of the steppe, given the stage of technological development and the economic constraints of the time and place. Known as a "techno-complex" in the archaeological jargon, this means something more general than "culture". We shall use this reconstructed techno-complex in conjunction with ethnography and the cultural geography of the region, to trace the development of agro-pastoralism in the homeland. For the Indo-Iranian branch and its migration, however, it needs to be said that archaeological evidence is sparse. Migrant groups do not live for centuries in the same place and so mounds do not form at their habitations for archaeologists to detect and excavate. And so our inferences about agro-pastoralism amongst the early Vedic and Zoroastrian peoples relies on literary evidence.

Text and Context

As we have it today the *Ṛg Veda* is a methodical arrangement, a codification, of 1028 hymns (*sūktas*) with religious content,

serving ritual purposes. These verses were composed orally in Vedic Sanskrit by certain Aryan *ṛṣis* from about 1500 to about 1000 BC. They are grouped in 10 *maṇḍalas* or Books, Books II to VII each said to be the verses of *ṛṣis* of one family (the Grtsamadas, the Viśwamitras, the Bharadvajas, etc), with individual hymns often ascribed to a particular *ṛṣi* poet. All are arranged so that the hymns to Agni come first and in order of length; these are followed by hymns to Indra in order of length, and so on. Book VIII contains the hymns of more than one family, and its arrangement and metre are different from those of Books II to VII. Into Book IX, the ancient codifier put in all the verses that had been composed for the god Soma, 114 hymns in all.

To this arrangement, made around the middle of the first millennium BC, were added supplements: Book I (containing the compositions of nine poets) and Book X. Some hymns in these two books are early poetry that had not been incorporated in Books I to IX, but some, judging by their language, were relatively late. Yet we cannot dismiss the material in Books I and X as "late" without subjecting the verse concerned to close and expert scrutiny. Conversely, Books II to IX also carry the occasional late insertion.

Although there was an arrangement of the verses into a written text, it remained important for young priests to learn the Ṛgvedic verses by heart. And even after printed versions have become available in modern times, this continues. Pupils repeat the words after their teachers, and go through various mnemonic exercises[1] in order to become word perfect. The hymns must be perfectly committed to memory. The reason for this is that, far from being anything like folk songs, the *Ṛg Veda* is poetry of a special type. Its hymns were chanted to the accompaniment of elaborate ritual performance. The Vedic religion was essentially a religion of ritual—sacrificial ritual, mainly animal sacrifice and offerings of Soma.[2] The

word '*Veda*' comes from a root that means 'to know', the concerned knowledge being the mastery of an intricate and complex ritual system. In this system it was believed that speech—the utterance of the verse—itself had the power to influence the gods. The sound of the words was of critical importance. Any error in words or their pronunciation meant that the utterance lost this power, so that the sacrifice was rendered ineffective. To put it differently, the 'consecratory word' was absolutely essential for the success of the ritual. And so the oral transmission of the correct version of the *Veda* was of central importance. (Presumably this was one reason why only a small section of society has ever been entitled to recite the *Veda*—the performance of the ritual itself was the task of only those few specially trained to do so.)

As the hymns were composed over a period of several centuries by several generations of *ṛṣi* families, we can expect that varying social and economic backgrounds pertain to different hymns. In addition, we can tell from the large number of place names (the names of rivers and mountains) in various verses that the region known to the poets extended all the way from Afghanistan in the west to the Sutlej and Sarasvati rivers in the east, from northern Afghanistan and Swat in the north to the middle Indus plains in the south (so that neither Sind, Kutch, Kathiawad, nor Malwa constituted the poets' landscape).

The language is not the Sanskrit with which we are familiar, viz. the Sanskrit of the *Mahābhārata* or of Kalidasa's drama, but an earlier language with its own grammar—hence the qualifier Vedic Sanskrit. Certain passages are terse. Full understanding of some portions is difficult, and debated even today. It also needs to be said that, despite popular perception, only small portions of the *Ṛg Veda* are used in present-day Hindu sacrament and ritual. And so, we have to

realize that the *Ṛg Veda* is neither an easily accessible source nor a literal description of the society and culture of the ancient *ṛṣis*. We can only extract bits and patches of information, embedded often as metaphor and simile in the text. Yet it is important to pursue such an enquiry, for the better we understand what the social organization was like, the better will be our interpretation of the verses and the religious thought behind them.

Aside from deities (the chief gods being Agni, Indra, and Soma), in the poetry there also figure demons, chiefs, poets, priests, and ancestors. We can tell that in general this was a society in which people herded animals, gave symbolic importance to the cow and the horse, and used the horse-drawn chariot in periodic warfare. They practised agriculture as well. Society was organized into a number of tribes. We can also state with confidence that there was no urban life: there is no enthusing on the glamour or bustle of any city, no reference to urban sophistication, no imagery of tall brick buildings of the kind that had made Mohenjo-Daro such a distinctive settlement. Similarly, there is no mention—leave aside a valorization—of writing, or the weighing out of precious substances, or owning a skillfully carved seal as a token of identity.[3] Incidentally, the poetry of the *Ṛg Veda* was the poetry of a robust rural people and not of intellectuals who had retreated into the forest to contemplate life or the after-life, as some have suggested.

A tribal society is understood as one that lacks specially constituted institutions of government. In the absence of a formal law-and-order mechanism (police, law courts, state officers, etc.), and the absence of kings enjoying the power to enforce their decrees on the people, there were other means of arriving at collective decisions, such as discussions among the men of a residence group, pan-tribal assemblies, and so on, and in the *Ṛg Veda* collective bodies are known by various

terms such as *sabhā*, *vidatha*, and *samiti*. In the text tribal chiefs were often called *rājā*, but this does not have the connotation of king or monarch as it does in later centuries. They were war leaders who lacked the institutional means of commanding crucial productive resources. In tribal society, instead, social bonds and cultural continuities rely on a characteristic valuation of kinship. That is to say, being related to someone guides one's dealings with them. These dealings may include co-operation in tilling fields or herding a flock, or help in times of stress, or the exchange of gifts, or arranging the marriages of young people belonging to different groups. People live their day-to-day lives in mutual co-operation with their kin because of affinity through blood or marriage. Kinship is the result of the real or assumed descent of several families from a common ancestor. In tribal society, typically, ancestor worship is important.

In the *Rg Veda* we find people of a patrilineage (a group related, by descent down two or three generations, from one man) pouring libations to the family ancestors: 'Come Agni, come with countless ancient Fathers, dwellers in light...eaters and drinkers of oblations...who travel with the deities....', says *RV* X.15.[4] In *RV* I.139, a hymn to Agni, the names of ancient *ṛṣis* such as Angiras and Kanva are mentioned; their 'long line' 'stretches to the gods—our birth-connections are with them'. In *RV* VI.52 is a prayer to the Fathers for protection when the worshipper calls on the gods. In *RV* II.42, a beautiful hymn to the Kapiñjala or partridge, it is said that it is auspicious to hear the bird call from the direction of the south, as that is the direction of the Fathers. The funeral hymn *RV* X.14 is addressed to Yama and to the departed soul. It says, 'Yama first found for us a place to dwell: this pasture never can be taken from us. Men born on earth tread their own paths to lead them to where the Fathers have departed.'

Agro-pastoralism

Pastoralists raise herds of animals, on whose produce (milk, meat, skins, hair, wool) they subsist, but which is supplemented by grain and other plant foods usually acquired from other groups. Pastoralists may be either sedentary or mobile. Mobile pastoralists may be either nomadic, moving all through the year from one pasturage to another, or else they may practice transhumance, taking flocks out of a permanently settled village for some weeks to graze. The practice of *both* agriculture *and* pastoralism is not unusual, being known to dozens of societies the world over, in ancient and modern times. However, we should not confuse mixed farming with agro-pastoralism. *Mixed farming* refers to the agriculturist's requirement of traction animals for ploughing, threshing, carrying grain to the village, raising water with the use of a pulley or lever, and so on. Plough agriculture has always had an animal input, for animals deliver energy at a faster rate than do men, and animal manure is valuable for a field that is ploughed. The farmer saves some of his grain for the animals. *Agro-pastoralism*, however, is distinct from agriculture, from pastoralism, and from mixed farming—the term has a special meaning. I would suggest that the people for whom the Ṛgvedic poets composed their verses were agro-pastoralists. Let us see what this entails.

People may pasture their animals in the vicinity of their habitation and fields, perhaps letting the animals into fallow fields or those on which the stubble of a crop remains. Once this is eaten, a herd (minus the young animals) may need to be driven further away, to a distance, say, of 5 km, from which the shepherds can bring the animals back for the night. But it may also be that conditions require a few shepherds to move even further and live in temporary grazing camps for several weeks, some of their relatives having remained behind in the agricultural settlement. Later, the temporary camp may

become a new habitation for the entire group, which then deserts its old settlement.

Whereas specialized pastoralists get their grain requirements from agriculturists through inter-group exchange, *agro-pastoral* societies produce both. Both give symbolic and ritual importance to cattle. While pastoralists concentrate on breeding animals, individual families in an agro-pastoral society now spend more time on the fields, now on the herds. A group living on agro-pastoralism is by definition one that tills fields and raises crops, keeping animals in numbers larger than needed for traction and the household's requirement of milk; the total hours of labour spent on the fields may in fact be much more than the time spent herding animals, and the caloric intake, also, may derive *more* from cereal food (wheat, barley, rice, millets, etc) than from milk, ghee, curds, cheese, and meat. On the whole a group that is called agro-pastoral does not stall-feed its animals, it puts/takes them out to graze. (This is not, however, an invariable feature of the system—for some weeks, or among some groups, stall feeding may indeed be resorted to.)

The distinctive features of agro-pastoral systems are as follows. (A) First, the cultures concerned value animals, and their produce, much more highly than they do food grain, in spite of people eating more of the latter. (A.L.Basham wrote[5] that in Ṛgvedic society agriculture may well have been important, but it 'seems to have been looked on as rather plebeian.') (B) Second, people 'invest' the proceeds of their successful harvests in increasing their herds. How is this done?

Cattle are used in sacrifices to the gods; they are given as gifts; cattle loans are made; and cattle are often, in such societies, exchanged by families and lineage groups at marriages. Thus there is a necessary connection between A

and B mentioned above. Cattle are 'wealth' and social currency. It is their exchange (in the widest sense) that creates links between groups, forges a relationship of patron and client between lender and recipient, or makes marriage—and the birth of a new generation of labour—possible. Each adult male in an agro-pastoralist society has thus, in his lifetime, to acquire the cattle necessary for social transactions and ritual prestige. More labour means increased production and prosperity, and labour is hence the source of the status of any group. Increased production in turn encourages people to have larger families. So cattle are necessary for a standing in society, also for the continuity of social customs and the reproduction of the group, and hence for the reproduction of the socio-economic system itself.[6]

Both A and B can give rise to a linked phenomenon (C), the geographic expansion that is often inherent in agro-pastoralism. Groups who are exclusively pastoral concentrate on keeping herds of the right 'structure' (age and sex, balancing the proportions of small animals, breeding males, traction males, lactating females, etc.); the emphasis being on quality, they also control the breeding so that only the healthiest and strongest individuals reproduce. In contrast, in agro-pastoralism the aim is to maximize the number of animals, and this means that in the occupied area grazing densities mount. Let us say that a group, after opening new land and settling to crop and animal tending, prospers. There come to be more people per area of land. The vegetation and soil quality may begin to deteriorate, prompting some families to move out. Over cycles of say thirty to fifty years, groups settle, prosper, and then disperse. We could call this the 'exploit-and-move' cycle of agro-pastoralism. Thus, somewhat strangely, it may be the agricultural component of the economy (in the early days of agriculture when land was plentiful but people still had to learn about seed types,

manure, and tillage, and leave the land fallow for long periods) that prompts mobility, more than the size of a herd. Individual shifts may be over short distances, but the cumulative reach is extensive.

In other situations, however, mobility is related to the herding sector: some members of a group may take the group's animals out in the winter or dry season (as the case may be) to regions where natural vegetation is available in plenty. Movements may be 'latitudinal' (north-south-north) or else 'altitudinal', between low-lying valleys and upland plateaus or mountain slopes. As we had said, on the whole agro-pastoralists do not stall feed the larger proportion of their flocks, except perhaps during severe winters in some parts of the world. Thus herd enlargement requires an extension of the migratory circuit.

Moreover, if, as in the case of early Vedic society, land was neither privately owned nor inherited by successive generations, then land rights would have been irrelevant to the formation of kin groups, and there would be nothing preventing younger generations from leaving the parental fold. In such societies the constituent patrilineages or tribal sections were not strongly corporate. So together with geographic expansion there would be social flexibility. Case studies of certain agro-pastoralist groups reveal that in a period of two generations the numbers of a group could double and its geographic reach could increase three-fold.

Let us now revert to the testimony of the *Ṛg Veda* and the comparative cultural value of livestock keeping and agriculture.

The members of a Ṛgvedic patrilineage or tribal section could form a *grāma*. According to the Sanskritist Wilhem Rau, the Ṛgvedic *grāma* does not mean what it does today, namely a village. In its earliest (Ṛgvedic) meaning, the *grāma*

was a group of related people who moved together. This is indicated by passages which state that the *grāma* 'has come' or that it has 'gone'. In Rau's interpretation such a group would live long enough in one place to raise a crop of barley, that is all. So *grāma* referred to a group, and/or the camp of such a group. 'Permanent settlements are not to be expected at all', says Rau. In support of this argument Rau refers to the use of another term, *arma*, in the *Ṛg Veda*. This *arma* was the deserted habitation (camp), its inhabitants having moved on—it was a ruin where people picked up pieces of broken pottery. Rau says that there appear to have been several deserted habitations scattered across the Vedic landscape.

But, you will ask, was not there the *pur* also? the infamous *pur* that Indra repeatedly destroys? There could be a moat around the *pur*, and occasionally it is associated with copper or stone, the exact meaning of which remains unclear. However, Rau is confident that *purāḥ* were simple, enclosed settlements built of wood, thatch, and reeds. The surrounding enclosure was of mud, or mud with a wooden fence, and this is why, he says, *purāḥ* when destroyed are described as 'rent, like cloth' or made to 'bend'. There are three or four references to *purāḥ* 'of the autumn': perhaps after the rains, attacks and raids were either planned or expected.

Obviously the Ṛgvedic people moved with herds of cattle. Periodic movement is necessary, we have said, when a group has more animals than it can feed on stored fodder during the dry season in one place. Besides, the immediate vicinity of a settlement may seasonally lack the sources of ground water necessary for animals. The larger a flock, the farther, and generally the more frequently, it has to be moved, for animals can deplete the natural vegetation of an area in a matter of days. The *Ṛg Veda* describes the god Agni as he whom people seek just as the cow seeks its warm stall. People pray to the gods to restore to them the cattle that had been

taken away by the enemy. They often fought for cattle—'with the bow let us win cows, with the bow the battle....' (*RV* VI.75). The cow pen is a metaphor of the firmament that holds the rain clouds—and clouds themselves are a metaphor of milch cows. In RV VI.28, cattle bring good fortune. 'Let them rest in the cow-pen and be happy near us. Let them stay prolific, many-coloured, and yield [for many days] their milk for Indra....The cattle of the pious worshipper roam over the wide pastures where there is no danger....O cows, crop your good pasturage and be prolific....' A poet prays to Indra (*RV* VI.35), 'Grant to the singer food with a store of cattle splendid with horses and the fame of riches. Send food to swell the milch cow good for milking...'

A poet's gifts from a wealthy chief could comprise a chariot, cows, horses, the occasional container with gold, carts, white bulls, occasionally a large herd of sheep (woolly sheep may be mentioned), occasionally dogs, occasionally women, and once, 'boxes'.[8] There were prayers for the safe return of cows that had strayed from the fold. As the rains began, people prayed, 'Let there be a good drinking place for the cows'. The text is replete with references to *paśu* or domesticated animals, the *gau* or cow being foremost among them. The cow pen is also mentioned often. That this was a society whose sustenance depended largely on flocks of animals, especially cattle, is also revealed by other pieces of information incidentally carried in the poetry. The Dāsa and Dasyu, traditional enemies of the people who performed the Ṛgvedic rites, were like others owners of large cattle herds. In the *pravargya* ritual of the Vedic priests, the offerings heated up in the clay pot were pastoral produce: ghee, cow's milk, goat's milk, and curds. Clothing was made of sheep's wool, and it was this wool that was used to ritually filter the juice of the *soma* plant. According to Dange,[9] Kṣetrapati was

not only the lord of the field, but also of the herd, and he is invoked as such; the rain fructifies the earth/pasture just as the bull fructifies the cow on the pasture land, and this bull is often identified as Indra. And so on.

It is important to note, however, that the Ṛgvedic verses are not silent about agriculture. In the verse I.117 the Aśvins plough the fields of the *Ārya* and plant barley. ('Ploughing and sowing barley, O you Aśvins, milking out food for men, you wonder-workers...you gave far-spreading light to the *Ārya*.') Hymn IV.57 is a prayer to Kṣetrapati:

> May Kṣetrapati be full of sweetness for us and may we follow him uninjured. Happily work our steers and men; may the plough furrow happily.... Auspicious Sītā, come near: we venerate you....Happily let the ploughshares turn up the ploughland, happily go the ploughers with the oxen.

In verse 101 of Book X, ploughing, sowing, and reaping are the metaphor of the sacrifice. There is here a reference to wooden buckets, which has been interpreted as evidence for the irrigation of fields:

> Lay on the yokes, and fasten well the traces; formed is the furrow, sow the seed within it.... Arrange the buckets in their place: securely fasten on the straps. We will pour forth the well that has a copious stream.... I pour water from the well[10] with pails prepared, and goodly straps....Pour forth the well with stone wheel, wooden buckets, the drink of heroes, with the trough for armour. Prepare the cow stall, for there drink your heroes: stitch the coats of armour, wide and many. Make metal forts, secure from all assailants: let not your pitcher leak, stay it securely.

I would like to suggest that water lifting devices in the

passage do not necessarily indicate irrigation for agriculture. As we shall see, mobile pastoralists also dig wells. They have to: without watering places the richest stretch of pasture is unusable, for sheep need to water almost daily. The crop most frequently mentioned is *yava* or barley, a cereal that withstands drought, can adapt to high and to low altitudes, and has a short growing season. The term *odana* may possibly have meant a variety of rice, and occurs rarely; *vrīhi* or rice as it was later known, does not occur in the *Ṛg Veda*.

The comparative cultural value of livestock and field produce cannot be gauged by counting the number of times each is mentioned in the text, for the actual subject of the poetry was not how people gained a living! So let us look at the indicators of cultural value. We have already mentioned some of these.

Prayers for wealth and fertility abound in the *Ṛg Veda*, these being prayers for many sons, and for large flocks of animals, but not for a high grain heap at the threshing floor, nor for the control or ownership of extensive fields. A tribal chief was called *gopa* or *gopati*, protector of cattle. Gifts made by patrons to their family priests comprised cattle, slaves, chariots, and horses, rather than sacks of grain or grants of land. A rich man was a *gomat*. The object of warfare was so often the livestock of the enemy, that battles are called *gāviṣṭi* (literally, a 'search for cows'). There were 'chiefs of the pasture' (*vrajanasya rājā*) who distributed booty from raids to their followers (*RV* IX.97.10). In *RV* I.73.9 one who pours an oblation prays for long life and for booty in battle; 'aided by you, Agni, may we conquer steeds with steeds, men with men, heroes with heroes'.

The most significant indicator of agro-pastoral values, however, is perhaps a ritual that was to develop as a royal ritual par excellence: the *aśvamedha yajña*. A. Hyland[11] finds echoes, in this Vedic ritual, of an ancient Eurasian steppe

custom in which the ambitious chief of a pastoral tribe would let loose a special horse to graze in lands that were beyond his immediate control. The horse was guarded by the chief's soldiers, and anyone who tried to drive it away was himself driven away. At the end of the year there was a sacrifice at which the chief became the legitimate claimant of the territory in which the horse had roamed, as his realm. In the case of the *Ṛg Veda* (I.162, 163), however, it needs to be noted that the horse sacrifice is fairly simple, a fertility ritual ending in a feast for all participants; its stated object is that the horse must reach the gods and absolve the sacrificer of sin and also obtain wealth for him—wealth in cattle, horses, and 'manly offspring'. It is only in the later Brahmanical texts that the *aśvamedha yajña* appears as a ritual claiming sovereignty over land.[12]

In many agro-pastoral societies, we have said, cattle are social currency, especially significant as marriage payments. In its turn marriage ensures the reproduction of the family. Is there, then, any hint in the *Ṛg Veda* that a man's group paid cattle to the kin of the bride? There is none—but we need to understand that there was little scope in the hymns for reference to women and to marriage. In *RV* I.109 there is a hint that a bride price was paid. In Griffith's translation, the poet who is looking around for kinsmen says that a worthless man is obliged to give a prospective father-in-law very liberal gifts. ('I have heard that you, Indra-Agni, give wealth more freely than a worthless son-in-law or spouse's brother.') It would not be unreasonable to suggest that, since war booty was in livestock, since cows and horses were prized as the best forms of wealth, and since high-value gifts to poets were also largely in livestock, the gifts exchanged at marriage, whether from groom's side or from bride's, were also for the most part in cattle.

The Indo-European Dispersal

Let us, in pursuit of the wide-ranging dispersal of the Indo-European language family in ancient times, spend a moment on linguistics.

On the basis of comparative language structure, phonetic patterns, and vocabularies, the general understanding is that the *Ṛg Veda* was composed in one of an enormous family of languages called 'Indo-European'. This parent group of languages, judging by key words (in Iranian, Indo-Aryan, Latin, German, etc.) for certain trees and animals, and considering the mutual influence of/to Finno-Ugric[13] and Proto-Kartvelian[14] languages, was located in the steppe (grassland) region of Eurasia, stretching east from the Danube river to the Ural mountains (in Europe), and then further eastward into Kazakhstan (in Asia). Moreover, the Vedic language is especially similar to the north-east Iranian language (Avestan) of the *Gāthās* of Zarathushtra. Both contain similar linguistic innovations in the parent Indo-European. That is to say, in both languages can be detected a substratum that comprises their parent language. In content too, the two religious texts had elements in common. So no one doubts that the Vedic and Zoroastrian traditions derived from a common source. 'Indo-Iranian' was a branch of the Indo-European family, its speakers apparently a splinter group who left the Eurasian grassland and made their way southward, and, after a period of unity, split into the Iranian and the Indian groups (Avestan, Nuristani, Dardic, and Indo-Aryan/ Vedic). Given archaic elements of this Indo-Iranian language branch in dated texts of the Mitannians (who had settled in northern Syria) about horse training, we can with confidence state that between 2000 and 1600 BC the Indo-Iranian group had splintered from Indo-European and then again splintered into the Indo-Aryan and Iranian languages.

Indo-Iranians

A glimpse now of the ancient religious texts of north-eastern Iran. Direct evidence comes only from the texts, and these indicate that the prophet Zarathushtra lived around 1700–1500 BC.[15] Zarathushtra's songs, the *Gāthās*, are incorporated in the first (called the *Yasna*) of the five sections of the 'Older Avestan' corpus.

Avestan was a language of eastern Iran. The Gāthās comprise hymns composed by Zarathushtra himself as well as a few later compositions of his disciples. The four parts of the corpus other than the *Yasna* are called the 'Younger Avesta' as they were composed after the death of Zarathushtra. They are liturgical texts. The followers of this new religion believed in one God, Ahura Mazda, and his prophet Zarathushtra, in *asha* or God's will or the cosmic order, in the pitting of good versus evil, in life after death, and in the final triumph of good. Zoroastrianism was to be the official religion of Iran from the fourth century BC until about AD 650, a long period during which Iran's power prevailed over a large region—sometimes over Egypt, sometimes as far west as Greece, and sometimes as far east as Gandhara—and its imperial institutions and culture were correspondingly held in awe over a large part of the world.

The Gāthās refer, in different contexts, to Bactria, Margiana, Sogdiana, Arachosia, and Drangiana, all parts of northern and north-eastern Iran. Yet no place or person mentioned in them is known in any other literature or inscriptions. "The tradition in which the prophet composed his own hymns appears to be still wholly that of a pastoral people", writes Boyce,[17] and it is understood that Zarathushtra's songs are culturally closer to the shared Indo-Iranian past (before the schism of Indians from Iranians) than are the hymns of the *Ṛg Veda*. Thus the Gāthās are probably older than the *Ṛg Veda* even though they were put

into writing only in the early centuries of the common era, in the Sassanian period.

In the songs of Zarathushtra the pastoral way of life is revealed. In Avestan poetry, as in the *Ṛg Veda*, war chiefs captured large numbers of cattle. No simile or metaphor draws from the cultivation of fields or from ripening grain. Instead, the cosmos is perceived as an enormous tent, and all animal creation falls under the rubric *gav* or cow. The bull is a prized item of wealth and the cow is a recurrent metaphor. Among the sections of society are priests, warriors, craftsmen, and *vastar* or 'pasturers'. People celebrated the 'driving in' of the flock into the valleys at the onset of winter, and the ritual fire or *atar* (the correlate of Vedic *agni*) was carried during migrations. The Zoroastrian place of ritual was a cleared rectangular space bounded by a furrow and sprinkled with water, and the ritual paraphernalia was such as could be packed and picked up when a group moved.

The Zoroastrian believer prays for a protecting herdsman, and Zarathushtra, as protector of suffering cattle, is by association protector of the poor and downtrodden. Sometimes the imagery in the prayers may convey the idea of the moral herdsman pitted against the evil cattle raider. As in Vedic society, priests were attached not to temples but to different wandering families. Here too, families were grouped in patrilineal tribal sections. The camel that is mentioned only a few times in the *Ṛg Veda* is frequently mentioned in the Older Avesta. In both bodies of literature the camel was called *ushtra* and the Iranian Prophet's name, Zarathushtra, perhaps meant 'skilled at managing camels'. Several other personal names too were compounds of *-ushtra*. The horse was yet another prized animal in the Gāthās and the chariot finds mention. Once Zarathushtra was rewarded with ten horses and a camel.

Eurasia

Through the long period of migration, the immigrants into Iran and India carried with them many elements of the ancestral culture and lifestyle of the Eurasian grassland or steppe. Among the latter is the pastoral mode of subsistence, of which we have spoken. Let us now survey some basic aspects of ancient pastoralism or agro-pastoralism, as the case may be, in the Indo-European heartland and amongst the undivided Indo-Iranians between the Eurasian steppe and South Asia and Iran, based on geography, ethnography and archaeology.

Cultural Geography

The Eurasian steppe is a vast grassland with an arid climate (low rainfall) and soils that are not conducive to either thick forest growth or a highly productive agriculture. It is a wide belt that lies south of the European forest zone, and fronts the Caucasus mountains and also the desert on its south. Summers are warm, but in most parts of the Eurasian steppe there is snow in winter and the rivers freeze for several weeks. It is the natural habitat of several grazing animals including horses.

Until very recently, characteristic of steppe land use were a limited engagement in agriculture (not very productive without irrigation) and the herding of several animals together: steppe horses, and also cattle, sheep, goats, and camels (animals first domesticated in regions south of the steppe). These animals can graze grass that is covered by snow once the horses have kicked the snow aside. Conditions on the eastern steppe are harsher than in Europe in winter, so that the agricultural season is shorter, and the two-humped camel, domesticated in Turkmenia, is an asset.[18]

Either everyone moved with the flocks, or else a few men and the animals moved out to warmer places in winter,

the rest staying behind. The family has always been the owner of the livestock and the unit of production, working alongside other families in clan groups. Common ancestors and the importance of genealogies were other general social characteristics. Some Kazakhs and Kyrgyz, even though they may have plots of arable land, travelled long distances from wetter highlands (summer grazing) to drier lower altitudes to escape the winter snows (which is called vertical transhumance) over, say, distances of 250 km. Others moved across zones of increasing rainfall and vegetation density (which is called latitudinal migration), between dry southern river valleys as the winter sojourn and northern latitudes (where there is greater winter snowfall) after the snows melt, turning back to the river valleys as the snowfall begins again, this involving long migratory circuits of even 1000 km. It is said that 600 sheep can be supported annually on one square mile of the northern steppe where rainfall is about 50 cm a year; the figure falls to a single sheep on the southern steppe where the annual rainfall is only 24 cm. (Note that a family would require 60 -100 animals in its flock in order to be economically viable as a herding family.) There is a correlation between herd size and distance of migration.

The long-ranging herders move in large clan groups comprising up to a hundred families, and have strong traditions of co-operation and mutual help in movement, in the use of grazing grounds, and in the utilization of well water. The *aul* of the Kazakhs, a group of portable dwellings called *yurts*,[19] is distinguished from the permanent village; '*aul*' means both a camp/seasonal village and its members. Those who first returned to the summer *aul* would invite those who arrived later to eat with them. Flock sizes of a clan can today go into the thousands. Routes are more or less fixed. Much herding is done on horseback. In the traditional narratives of the people, the horse sometimes

figures importantly, e.g. giving advice to the heroes, or saving the sheep.

In Turkmenia, to the south of the steppe in Asia and the deserts Kyzyl and Kara, there is a stronger presence of (oasis) agriculture; four to five hundred sheep could be herded together; and there was much camel riding (the two-humped, Bactrian camel). Here the routes of movement have to be located according to the availability of wells. Sheep are the most numerous animals in the flocks of Central Asian multi-animal herders, and for them daily watering (except for short periods in spring when the vegetation is moist) is necessary. Wells are a unifying factor: families come together to dig and clean them; they take turns at using them; but they do not deny others the use of them. Oxen may work at wells to raise the water.

Sheep are the most numerous in Eurasian flocks, but in some areas cattle are more highly valued, and it is a matter of prestige to own many cattle. Sheep and cattle form the core of the steppe herd, with a few goats; horses are essential for riding and the mobility requisite for herding huge flocks. Horse milk is the most nutritious of all, and when fermented it is considered delicious. After the camel, it is the horse which best withstands a water-deficient environment; it can swiftly cross a long distance over the steppe with a single daily drink of water, even in summer. Its vision and speed enable it to flee immediately it perceives danger.[20] Pack animals in some parts of the steppe-desert zone, camels too are a symbol of wealth.

Among other pastoral elements in Central Asian cultures are the cart or wagon yoked to oxen; rituals at the time of sheep shearing; the valuing of dairy products and a view of several of them as having healing powers; rituals at the time of the migration out of the seasonal habitation when animals are driven between huge fires (burning grasses fumigate the

animals that have been stabled for weeks); the use of cattle or other livestock in the making of marriage payments; and one or other form of horse ritual.

The Eurasian Techno-Complex: Archaeological Evidence

As we move to the archaeological picture, we may bear in mind that 'Indo-European', 'Indo-Iranian', etc. make sense only in terms of language, and that archaeology can only provide support for historical-linguistic reconstruction.[21] Second, at almost every juncture the archaeology of the steppe is contested: this includes dates, the delineation of cultures and culture groups, the evidence of horse domestication and horse riding, etc. Third, in contrast to the sheep and cow, the skeleton of the horse shows no clear morphological change after domestication, so that we do not know for sure just where or when the horse began to be herded and ridden. All we can say is that the horse was first domesticated for its meat and milk.

On the steppe west of the Urals the tending of crops and animals had begun by 5000 BC. Millet (panicum), wheat, barley, pigs, and cattle were soon followed by sheep. A Ukrainian culture of the 'Eneolithic' (what we in India would call 'chalcolithic') stage,[22] known as the Sredny Stog culture, dating 4300 to about 3500 BC and with about 80 sites, is relevant to us mainly because of the horse. Exceptionally large numbers of horse bones were found in/near the hearths of the excavated site of Dereivka on the banks of the river Dniepr near Kiev. Stone tools were in use, with limited copper, and hand-made pots had pointed bases. Sheep, goats, and cattle were domesticated.

A controversy has recently been raging about how we are to interpret the horse bones excavated at Dereivka.[23] Was the horse domesticated, or was it hunted by sedentary

villagers? This has much bearing on Indo-European mobility and expansion. Two scholars had identified bit wear (the abrasion marks made by a bit inserted into the mouth of a horse when it is ridden) on a pre-molar horse tooth at this site, and they claimed that horse riding was therefore of a very early date in this Indo-European homeland region. Later, however, the horse tooth they had inspected was dated by the radiocarbon method and found to date between 700 and 200 BC. It was admitted that the tooth must have lain in a pit dug into Eneolithic strata by later Scythian residents on the site, whose houses had been built on the remains left behind by the Eneolithic people. Obviously the outlines of the pit had not been recognized by the excavators, a frequent error made by field archaeologists.

Yet these scholars are not willing to write off the idea of Eneolithic horse domestication at Dereivka. They point out that horse skulls occur in graves.[24] Since the other animals buried with people are cattle and sheep, both domesticated, it is likely, they say, that the horse too was not a hunted wild animal. Experts also experimented with soft leather and rope bits to control horses, and found that the kind of rubbing of the pre-molar teeth that resulted was similar to that observed on *other* horse teeth from Eneolithic contexts. It needs to be said, however, that an early date for riding is not widely accepted by scholars today.

In the Bronze Age, in continuity with earlier cultures, there came into existence the Yamnaya culture (*c.* 3600 to 2400 BC according to many scholars) across a very large part of the steppe. Now appear wheeled wagons drawn by oxen; the use of metals; and burials in pit graves or 'kurgans'. The latter were the burials of high status persons with their animals and weapons, covered by mounds of earth. Perhaps mobile pastoralism had also begun to develop by now: there are fewer settlement sites than burial sites, and the latter lie

on the open steppe, far from the cultivable river banks, because herdsmen would have taken their animals far out to graze. There are sheep and goat bones in the graves on the steppe. However, agriculture continued and this horizon could have seen the unfolding of an agro-pastoral techno-complex.

It is the Central Asian steppe east of the Urals, mainly in Kazakhstan, however, that is of central importance for us as the logical region of the Indo-Iranian split. Some of the richest pasture lands are to be found here even though winters are especially harsh. Contemporary with the late Sredny Stog phase in the west flourished the Eneolithic-Early Bronze 'Botai culture' of northern Kazakhstan, in the eastern forest-steppe ecotone (or ecological boundary), dating 3500 to 2600 BC. There were pit houses, but agriculture has not been ascertained. At the site of Botai on the river Ishim, 300,000 horse bones were found. In a single house 18 horse skulls were buried. Were these the bones of a domesticated species of horse? As indicated above, only indirect evidence exists. The age and sex of the bones was determined where possible, to check whether the bones give a random sample of a natural horse population (which would mean that they were hunted, i.e. wild) or instead whether they represent a particular age group (young males, mature females, etc.). When people keep horses, they control their reproduction: they 'cull' the herd in a specific way, choosing the age and sex of the animals for slaughter. However, this too poses problems for the archaeologist. When herdsmen want the meat, they will slaughter young animals, resulting in bone residues with a large proportion of animals below four years of age. However, if milk is the main product and if horses are also required for traction, the herders will obviously let a large proportion of animals grow into adulthood and the bones of slaughtered horses will not show a marked age structure.

Because the Botai horse bones do not represent any sex or age bias—mares and stallions of different ages were present in equal number—some scholars have concluded that they were the remnants of a wild horse population grazing near the village of Botai. (Bit wear is alleged, and contested, on horse teeth from Botai as it is for teeth from Dereivka.) The huge number of horse bones by itself should not lead to the conclusion that the ancient people of Kazakhstan bred them in herds, but if horse bones represent 99 per cent of all animal bones at Botai, this surely signals a new relationship between people and horses. Perhaps wild horses were rounded up and killed in large numbers. Yet there was something strange. How could ancient hunters kill so many swift-footed wild horses? An expert who studied the skulls suggests that that a single method, pole-axing, was used: a horse held tight with rope by two men was struck on the forehead by a third man. Thus there now exists a hypothesis that at Botai a few horses were tamed and ridden in order to round up and then pole-axe the wild horses of the locality.

In Kazakhstan after the Botai phase we have the Andronovo culture. Its early phase is represented by the Sintashta burials south of the Urals (2200-1800 BC) with an economy based on sheep and cattle raising and metallurgy. There were fortified villages, and graves of warrior chiefs with rich offerings including horses (seven in one burial chamber) and horse riding equipment. The swift horse-drawn chariot also came into use.[25] Obviously, the horse was not only domesticated by now (c. 2000 BC), it was also harnessed and put to traction. The Bactrian camel was also to appear in the archaeological record of the Andronovo culture. The first crops in Kazakhstan were wheat, barley, and pulses; the millet *Panicum miliaceum* had become a popular crop with nomads as it matures quickly, and is drought resistant. The Andronovo culture extended east of the Urals into Bactria.

In due course elements of the Andronovo horizon spread southward into more salubrious environs. South of the Aral Sea occur carved figurines of bone and ivory, like ornaments of the steppe. After 2000 BC there arrived in northern Afghanistan and Bactria the steppe pottery, coarse and incised. Kohl writes of a "continuous infiltration and assimilation of cattle herders into the established sown world of irrigation agriculturists" in Bactria and Margiana.[26]

It is only around 1000 BC, in the Iron Age and after a period of agriculture in small villages, and mobile herding, that most eastern steppe villages were deserted and full horse-mounted nomadism (true horsemanship, if you like) is in evidence. While we do not expect early Indo-Europeans or Indo-Iranians to have been the counterparts of the horse-mounted nomadic Scythian and Sarmatian warriors of the Iron Age, we need to scrutinize mobile agro-pastoralism and the role of horse riding in the dispersal of the early groups. How did the characteristic steppe form of mobile herding evolve? a form that was beset with outmigrations?

The first issue is horse herding itself. The general understanding has been that it can be done only from horseback,[27] but Robert Drews questions this assumption.[28] He does not accept that there is evidence for riding at either Dereivka or Botai. He admits that dogs may round up only flocks of sheep and cows and cannot outrun horses. Yet Drews suggests that domestication involved the taming of and caring for mares and their young, and penning and stall-feeding a few horses or else allowing them to free-range around the settlement, so that riding was not necessary. He thus conceptually distinguishes horse domestication from mobile horse herding from horseback, assigning a late date—after 1000 BC—to the latter and insisting that horses were kept only for milk and meat even after 2000 BC. Francfort too says that horse domestication and harnessing around

2000 BC do not amount to horsemanship or riding.[29]

Yet Drews acknowledges that horse keeping had reached southern Mesopotamia, at an appreciable distance from the habitat of the wild horse, as early as about 2100 BC; a horse rider is depicted on a seal of Ur III date, and there are also texts about the feeding of [chariot] horses at this time.[30] Already by the fourteenth century BC experts from the Mitannian kingdom were writing their treatises on horse training. (We may recall that it is the centuries after about 2000 BC that are relevant to the Indo-Iranian migration and further dispersal.)

In the face of this evidence, Drews argues that the early riders did not ride 'well', only managing to stay on horseback, a simple rein through the nose of the horse being held in the rider's left hand. He says that before 1000 BC riding 'could not have been of much consequence', meaning thereby that people rode for sport and for carrying messages, but not for hunting or warfare. Drews draws on the fact that mobile herdsmen in south-west Asia have been known to move on foot—but multi-animal pastoralism of the steppe is not on the same scale as the herding of sheep and goats in western Asia. Clearly Drews' interest is not mobile pastoralism but the development of horse-mounted warfare, and he separates, quite correctly, chariot horses from ridden horses. However, I suspect that he does not distinguish sufficiently between horseback *riding*—clearly documented in Mesopotamia at a very early date—and horse-mounted *warfare* which could well have been a later development. In any case, as far as the spread of early Eurasian agro-pastoralists is concerned, militarism and conquest are not the issue. I thus suggest a sequence on the following lines for the development of agro-pastoralism.

It has been said that after the initial stages of village life, sheep, horse, and cattle herds grew. The keeping of large

flocks in settled villages all through the year poses problems because winter, for instance, is a severe season on the steppe, several inches of snow covering the ground. Pasture around a settlement may be rapidly depleted by a large flock in any season. And if flocks are brought back to the settlement every night, the local grass can be depleted in a span of about 25 years. The discovery of wells at certain early sites is of significance: it means that people had developed the techniques of providing watering holes for sheep, so that migration routes far from snow-bound villages could be chosen, and with horse riding the mobility of tribes would be enhanced. Winter pasturage areas gradually diversified from summer grazing grounds: i.e., transhumance came into existence. Together with this, as we have seen, people would have needed to shift their habitations and fields, to, say, distances of about 50 km in every generation or so. And this new development, during the Yamnaya and Andronovo horizons, set the stage for a new economic system. Ultimately the riding of horses would have made it possible for men to scout out pastures and round up hundreds of sheep, horses, and cattle, so that animal-keeping on a truly large scale was possible. The spread of the Andronovo horizon is remarkable, and obviously a techno-complex had developed in which people made their adjustments over a huge territory and its multiple ecological niches.

Such a system, however, would have had its risks. The animal-land ratio on the steppe is a precarious one. Many factors, such as ice in winter, blockage of a major route, or drought, could have decimated herds or pushed the people out into new routes and lands. This is the background of the southern movement, after 2000 BC, of Central Asian peoples into Turkmenia, Bactria, and Margiana, and then into the northern mountain zone of the Indian subcontinent. (Incidentally Andronovo traits also spread towards Siberia

and into northern China.) We repeat, in countries such as Kazakhstan it is entire heterogeneous regions and their large flocks that supported an early agro-pastoral system utilizing various seasonal niches, and such a system could have spurred the repeated out-migration of smaller or larger groups. (It also needs to be said that where and when the custom of burying war chiefs in tombs together with their weapons, horses, or provisions for the afterlife declined, and where life was mobile and groups were small and, over the long term, migrating so that mounds did not form at settlements, we cannot expect to find extensive archaeological remains, leave alone horse bones.)

We should not believe that the spread of the horse and chariot[32] in the second millennium BC always coincided with the replacement of local languages by Indo-European. Indeed, sometimes the horse spread into a region without any traces of Indo-European. Such is the case with Mesopotamia, where domesticated horse bones occur in the north (the Habur valley) a little before 2000 BC; cuneiform tablets from that region mention the feed of horses and the allowances for their grooms; and a seal image of a horse rider (mentioned above) of the period 2100–2000 BC occurs in the south, and in royal correspondence in central Mesopotamia around 1800 BC, horses were coveted. Even so this cannot be an argument for rejecting the role of horse riding and mobile animal herding in Indo-European language dispersal. In fact, the Turkic, Mongolian, and Uralic language groups of horse-riding nomads also dispersed from this vast steppe region. Turkic and Mongolian languages supplanted the Indo-European languages of Central Asia between 200 BC and AD 1200. Very few languages, such as Osset, remain in Eurasia as testimony of an original Indo-Iranian linguistic community. Turkic languages, spoken by the military elite in Central Asia, spread with the conquests of the latter into

western Asia amongst populations of non-Turkic peoples who outnumbered by far the new immigrant conquerors. Here however we need to make a distinction between outward dispersals of agro-pastoralists on the one hand (in our period) and nomadic horsemen's conquests (in later periods) on the other. But later dispersals also prove that language replacement can occur without population replacement.

In Sum

The cultural heritage of the Indo-Aryans who came into India in the second millennium BC comprised, among other things, periodic movements across an open landscape devoid of political frontiers, close identification with cattle, the importance of the successful breeding of cattle, the military advantage of the horse-drawn chariot, and the invigorating qualities of *soma/haoma* juice. It was a heritage in which robust and hardy cattle-breeders had sometimes to turn cattle-rustlers for their survival.

We have found that Ṛgvedic society was tribal, its ancestor rituals being of commensurate importance. The Ṛgvedic *grāma* was not a village in the sense understood today, but a group that was on the move. In this culture greater value was attached to cattle and horses than to fields or to piling up stacks of grain. Military chiefs were *gopati* or else *gomat*. Cattle were social currency, figuring as prized booty from war, as gifts to a poet, as the best form of wealth. The Iranian Gāthās reveal a similar culture, utilizing the metaphors of the herd, the protecting herdsman, etc. Agro-pastoral societies value animal wealth over agricultural wealth even when they spend more time on their fields than with their animals, or eat more grain than meat. Unlike pure pastoralists, who aim to breed animals of fine quality and maintain the right sex and age ratios in their herds, agro-pastoralists aim to maximize herd size: it is animals that

enable ambitious individuals to acquire wives and clients, thereby prestige and political clout.

The Indo-European heartland was the Eurasian grassland, the region where the horse was domesticated and the chariot invented; the Proto-Indo-European or parent language, as reconstructed by linguists, shows the mutual influence of Finno-Ugric languages of the forest belt that stretches north of the steppe, and of the Proto-Kartvelian languages of the Caucasus mountains to the south of the steppe. Also relevant is the close linguistic similarity between the languages of the Gāthās and the *Ṛg Veda* which reveals that they had recently branched out from the same parent language and were closely related peoples with a common history.

The Eurasian steppe that stretches between the Dniepr and the lower Oxus is not a homogeneous region, but in the days of a simple technology, the environment gave scope for mobile animal herding rather than investment in extensive/ intensive agriculture. The role of the horse in cultural development, we have seen, is controversial on several counts, and we can say that horse-mounted warfare began only after 1000 BC. But there is a good case for horse riding from 2000 BC onwards. Horse riding gave people greater mobility than before and the potential to move huge herds of sheep (together with other animals) from horseback. Horse riding enabled people to scout and seek out the best pastures and routes. Thus the serial use of a series of micro-environments was feasible. But such land use systems were fragile: herds can dwindle and expand with rapidity, depending on several local conditions. Animal raids and armed and chariot-mounted skirmishes were therefore also part of the system. Other cultural resources included networks of kinship, clientage, and exchange.All this meant that groups and social boundaries were flexible, the movements of one group

pushing another out of its place or else bringing about opportunities for inter-marriage and mingling. In bad times, brought about by drought, disease, overcrowding, or military defeat, tribes could get fragmented into dispersed groups.

It was the logic of this system that ultimately a realization would have come that herds—and wealth and prestige—can indeed be rapidly increased without a commensurate increase in labour, but that animal wealth and social influence also can dwindle equally soon. Given suitable soil and rainfall conditions as on the Indo-Gangetic plains, it was investment in agriculture and sustained sedentism in villages that ultimately would afford ambitious chiefs the means to a long-term increase in wealth and followers. Through history, mobile chiefships have, given the right geographic conditions, rapidly transformed into sedentary ruling elites. By the Later Vedic period, then, agro-pastoralism was transformed into a system of mixed farming and sedentary life.

Acknowledgements

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References

1. These were several: aside from the *pada pāṭha* which was the text with all its words separated and not joined by *sandhis*, there was the *jaṭāpāṭha* in which one memorized in the order 1-1, 2-1, 1-2, 2-3, etc; and there was the *kramapāṭha* in which memorized in the order 1-2, 2-3, 3-4, etc.
2. Rituals ranged from the kindling of the fire in the home, to the setting up of the *yūpa* or sacrificial post, or the slaughter and cooking of a goat or bull or horse, offerings of ghee, and also the pressing of *soma* stems between two stones, after which the juice was filtered, poured out, and drunk. An essential element in Vedic ritual was the fire. Oblations were poured into the fire. Sacrificed animals were cooked in the fire. A fire installed at marriage 'defined', so to speak, the household. It burned until the death of the father, and claimed his body at the cremation ritual. The next generation kindled a new fire. We shall see that the rituals of the early Iranians, who also were Aryans and culturally very close to the people who recited the *Ṛg Veda*, were also centred on the fire.
3. The Harappa culture is marked by writing, and the use of ivory, lapis lazuli, and translucent red carnelian stone, items that have no presence, leave alone importance, in the *Ṛg Veda*. The cubical weights of the Indus civilization, beautifully cut and polished, are the products of skilled craftsmanship, so too the seals cut in intaglios. I mention these items to make the point that it is not possible to match the archaeological remains of the Harappa civilization with the material culture as revealed in the *Ṛg Veda*.
4. Ṛgvedic passages quoted in this chapter derive from the translation of Ralph T.H. Griffith (1896), *The Hymns of the Ṛgveda*, Varanasi: Chowkhamba Sanskrit Series.
5. A.L. Basham (1976), *The Wonder that was India*, 3rd revised edn., Delhi: Rupa, p. 36.
6. Small stock, sheep and goats, rarely play this role. They are "the small change" of the pastoral "currency", as they are small and breed quickly. Moreover, in many societies they are undervalued as tending them is women's work.
7. W. Rau (1976), The Meaning of Pur in Vedic Literature, Munich: W. Fink Verlag, pp. 41-50 in particular.
8. B.H. Kapadia (1961), *The Danastutis of the Ṛg Veda*, Vallabh Vidyanagar: S.V. Vidyapeeth. This is a translation from the German of a dissertation written by Manilal Patel.

9. S.A. Dange (1970), *Pastoral Symbolism of the Ṛgveda*, Poona: Univesity of Poona.
10. Jan Gonda (*Vedic Literature*, Wiesbaden: O. Harrassowitz, 1975) reads this portion as a poet urging priests to wake up and begin work, saying, 'Yoke the ploughs; spread out the yokes; sow here the seed....' And the poets 'set the buckets in order and fastened the straps together.' They then drew water from the well.
11. A Hyland (2003), *The Horse in the Ancient World,* Stroud: Sutton Publishers, p. 23.
12. See N.N. Bhattacharyya (1996), *Ancient Indian Rituals and their Social Contents*, Delhi: Manohar, pp. 4-9, 21-22.
13. Languages of the Eurasian forest belt to the north of the steppe.
14. Languages of the Caucasus, to the south of the Eurasian steppe.
15. This section relies on Mary Boyce, *A History of Zoroastrianism*, Leiden:E.J. Brill 1975; Mary Boyce, *Zoroastrians*, London: Routledge, 1986; I. Gershevitch ed., *The Cambridge History of Iran Volume* 2, Chapter 13, The Old Eastern Iranian World View According to the Avesta, by M. Schwartz, Cambridge: Cambridge University Press, 1985; and Piloo Nanavutty, *The Gathas of Zarathushtra*, Ahmedabad: Mapin, 1999. Admittedly, there are many who doubt such an early date for Zarathushtra as a prophet, preferring to place him before the Achaemenid period (sixth century BC), but it needs to be said that no Achaemenid inscription makes mention of him, and neither does Herodotus. Meanwhile the linguistic and philological evidence remains strongly supportive of the early date.
16. Literally the priest's daily worship, a counter part of the Vedic *yajña*.
17. Boyce, *History of Zoroastrianism*, p. 14.
18. P. Kohl is one of the few archaeologists who appreciates that the steppe is not one huge undifferentiated region. See his "Transformations of Material Culture", *Rossiskaya Arkheologiya*, 2004 and 2005 (in two parts).
19. Made of felt, these are round shelters with pointed roofs.
20. Robert Drews (2004), *Early Riders*: *The Beginnings of Mounted Warfare in Asia an Europe*, New York: Routledge, pp. 8-9.
21. Paul Raulwing (2000), *Horses, Chariots and Indo-Europeans*, Budapest: Archaeolingua Series Minor, p. 16.
22. The chalcolithic is a stage when people use copper ores as ornaments, or native copper in the cold state, exploiting the

malleable properties of the latter by beating it to flatten it. This is not, however, a stage that sees full-fledged metallurgy.

23. See M. Levine, C. Renfrew, K.Boyle (eds) (2003), *Prehistoric Steppe Adaptation and the Horse*. Cambridge: McDonald Institute; also B. Genito (ed.) (1994), *The Arhaeology of the Steppe*, Napoli: IIMEO.
24. Across the steppe in these early centuries, we find, together with human burials, the skull and lower extremity bones of the horse—"head-and-hoof burials"—that seem to indicate the ritual burial of a horse hide.
25. Head-and-hoof burials were still a custom.
26. P. Kohl 2004 and 2005, *op.cit*.
27. Admittedly, riding could not have come about easily or swiftly—the horse does not take kindly to a person on its back, and it has to be broken in, with specific equipment such as reins if not bridle and bit.
28. Robert Drews, *op.cit*., specifically pp. 20-23.
29. H.P. Francfort, 'Aspects de l'image du cheval dans les petroglyphs d'Asie interieure', *Etudes Mongoles et Siberiennes*, forthcoming.
30. *Op.cit*., p. 33.
31. *Ibid*: p. 46.
32. The best documentation occurs in Paul Raulwing (2000), *Horses, Chariots and Indo-Europeans*, Budapset: Archaeolingua Series Minor.

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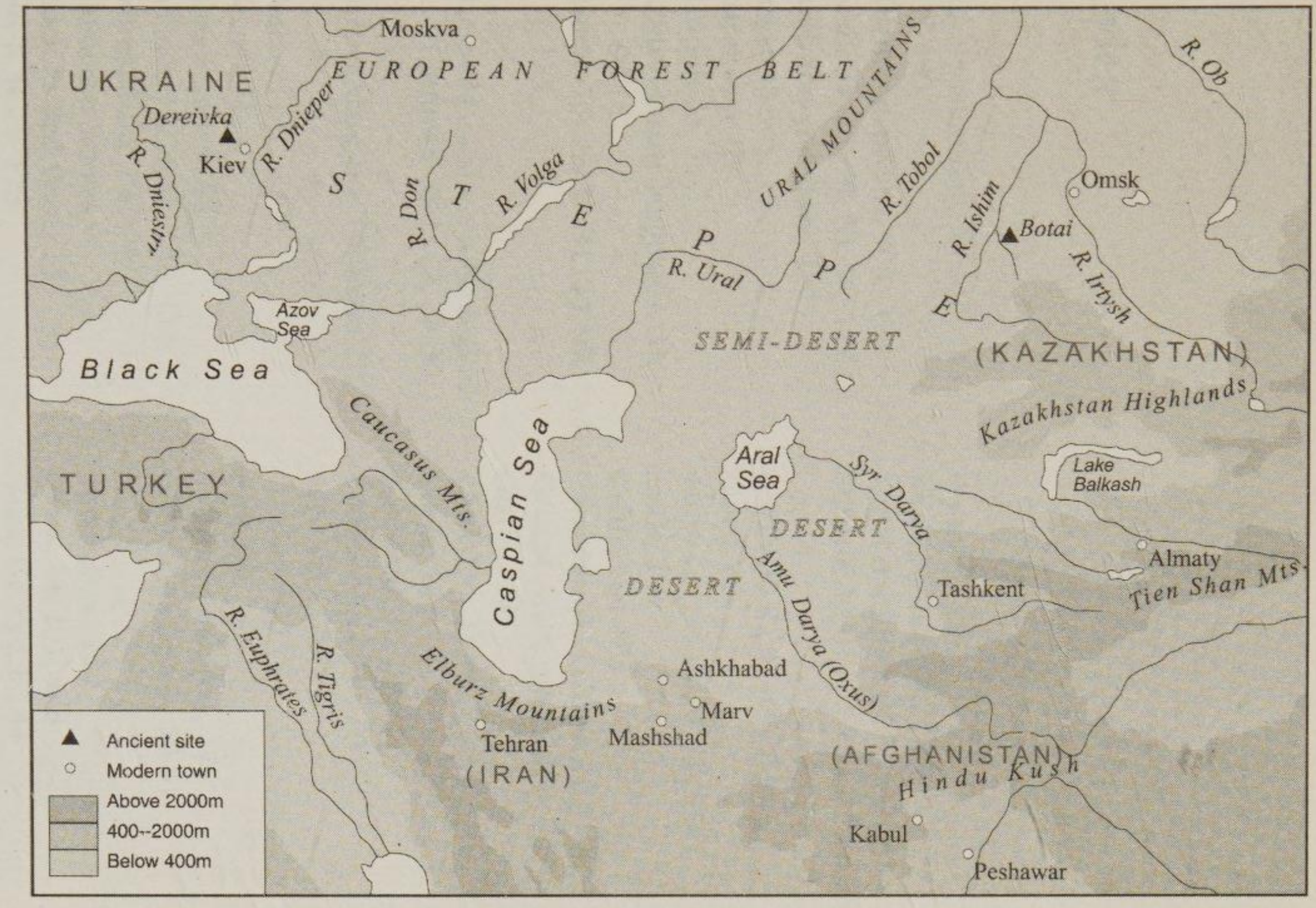
Moskva
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R. Volga
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R. Ural
R. Tobol
R. Ishim
R. Irtysh
R. Ob
Omsk
Botai
Azov Sea
Black Sea
SEMI-DESERT
(KAZAKHSTAN)
Kazakhstan Highlands
Caucasus Mts.
Caspian Sea
Aral Sea
Syr Darya
Lake Balkash
DESERT
DESERT
Amu Darya (Oxus)
Tashkent
Almaty
Tien Shan Mts
TURKEY
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R. Tigris
Elburz Mountains
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